

CITY OF BIRMINGHAM

REPORT OF THE
MEDICAL OFFICER
OF HEALTH

FOR THE YEAR

1938



BIRMINGHAM :

The Birmingham Printers, Ltd.,
Hill Street and Station Street.

THE UNIVERSITY OF CHICAGO

PHYSICS DEPARTMENT

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PUBLIC HEALTH DEPARTMENT,
THE COUNCIL HOUSE,
BIRMINGHAM.

To THE CHAIRMAN AND MEMBERS,
PUBLIC HEALTH AND MATERNITY AND CHILD WELFARE
COMMITTEE.

In introduction to my report on the health of Birmingham during 1938 I desire to submit some preliminary observations.

The results of the year's work can legitimately be regarded with satisfaction by a staff which has been subjected to an exceptional degree of stress during a period of national and local pre-occupation with protection against the dangers which would come with war. In a number of directions the Public Health Department has been depleted in a notable degree of staff engaged, often for prolonged periods, in the development of air raid precautions casualty services; and the expanding efficiency of those services at the present time owes a great deal to the pioneer work done during the past year by the officers concerned.

Despite such diversion of energies normally engaged in the Public Health service, the health records of the City have on the whole been encouraging. The death-rate was lower than in the previous year, and was within a decimal point of the lowest level ever attained here. The birth-rate continued the slow rise experienced since the minimum reached in 1933. The illegitimate birth-rate showed an increase; this was related to an unusually high incidence among recent immigrants to the City—among girls, therefore, specially unprotected and exposed to risk—and does not necessarily imply a general lowering of standards, even though it does not necessarily escape that implication. The infant mortality was practically identical with that for 1937. The death-rate among children aged one to two years, and that among children aged two to five years, both showed a marked decrease. The maternal mortality similarly afforded a welcome continuance of the downward curve which has been recorded now over a period of three years. The mortality among young infants under one month of age (the neonatal mortality) also dropped, and the number of deaths among infants from prematurity was the lowest on record.

In matters of housing solid progress has been made in implementing the current section of the City Council's programme of systematic slum clearance, as indicated in the body of the report. In view of the heavy drain on the resources of the general staff of sanitary inspectors, it was arranged after the end of the year to separate from that general staff, and to amplify, a special staff of housing inspectors, under the charge of Mr. Lamb as Chief Housing Inspector. The alteration will be indicated in greater detail in the next report, to which properly it belongs.

The city hospitals have, as usual, been consistently and heavily occupied throughout the year. The Public Health service as a whole, and Dudley Road Hospital in particular, have suffered a great loss in the unexpected death of Dr. Ellis, Medical Superintendent of that hospital. Although he had been absent on prolonged sick leave, Dr. Ellis was on the point of returning to his duties, and his death following on a new and wholly unexpected complication was a sore blow to his colleagues and to the Committee, on grounds both professional and personal. Dr. Ellis was a man of outstanding capacity and administrative experience, applied wholeheartedly over a long series of years, first to the service of the Board of Guardians and then to that of the City Council; while his kindly personality and artistic outlook endeared him to his fellows. The city is much the poorer by his loss. He has left behind him an outstandingly fine hospital which in a real sense can be claimed as his own creation.

During a part of the year a National Health Campaign was being applied in numbers of areas throughout the country. A valuable, even though unobtrusive, contribution to that campaign was effected by a particular form of co-operation between the Public Health Department and the large section of general practitioners embodied in the Public Medical Services (a system of voluntary health insurance applying to whole families, and covering a very considerable number of Birmingham families). At the request of these practitioners the precise procedure adopted in the Committee's ante-natal clinics and infant welfare centres was described in a series of talks by a medical officer of the Department meeting the practitioners in groups in order that the standards and methods might then be applied by them to those families under their care. Such forms of mutual assistance may be wholeheartedly welcomed.

The year has fortunately been free from any major prevalence of infectious disease. Diphtheria has continued to levy its toll, but the process of mass immunisation is making steady strides, and we are now within measurable distance of the point at which—if parents, teachers and doctors will continue to persevere with us in their present joint effort—a real effect will become evident in diminishing death from this disease.

I have referred already to the general strain imposed by the initiation and fostering of the air raid precautions casualty services. No reference to the year's activities would be complete which failed to mention the sudden

and unprecedented stress produced by the September crisis, when the country and the world were brought to the brink of war. It would make too long a story to detail the many ways in which means were improvised, the beginnings of schemes were suddenly and violently expanded, and volunteer staffs were enrolled like magic, all ready and willing to work wherever and for as long as the need required. However improvised that sudden effort, it was nevertheless such that no shame need have been felt at the result had it been tested. Fortunately the necessity was postponed, it may be hoped for ever. I am left with a deeply impressive remembrance of eager and generous service volunteered and given before it was sought, by all ranks and all ages.

In the many activities of the Department I have been able to rely with confidence on the co-operation of the staff, and to them, and to the Committee, I would tender my thanks for consistent collaboration and support throughout the year.

I am,

Your obedient Servant,

H. P. NEWSHOLME,

Medical Officer of Health.

Staff of Public Health Department

GENERAL

Medical Officer of Health

H. P. NEWSHOLME, M.A., M.D., F.R.C.P., B.SC., D.P.H.

Deputy Medical Officer of Health

MATTHEW BURN, M.C., M.M., F.R.C.P. (EDIN.), D.P.H., D.T.M. AND HY.

Senior Assistant Medical Officer of Health

G. C. KELLY, B.SC., M.D., CH.B., D.P.H.

Senior Assistant Medical Officer of Health for Maternity and Child Welfare

ETHEL CASSIE, M.D., CH.B., D.P.H.

Assistant Medical Officer of Health

W. R. MARTINE, M.B.E., T.D., M.D., CH.B., D.P.H.

Assistant Medical Officer of Health for Diphtheria Immunisation

VERA FELLOWES, M.B., CH.B.

Secretary

P. MCKINNON.

Accountant

A. J. ANSCOMBE

Statistician

L. RAWLINGS, F.C.I.S.

General Clerical and Financial Staff . . . 63

SANITARY DEPARTMENT

Chief Sanitary Inspector

A. W. TURLEY, CERT. R.S.I.

Deputy Chief Sanitary Inspector and Senior Housing Inspector

D. J. E. LAMB, M.C., CERT. R.S.I.

Assistant to Chief Sanitary Inspector

H. HOWES, CERT. R.S.I.

District Inspectors

C. F. MARK, CERT. R.S.I.

C. E. BYARD, CERT. R.S.I.

H. McDONALD, CERT. R.S.I. AND R.S.I. MEAT AND FOODS

T. BAKER, CERT. R.S.I.

T. SLIM, CERT. R.S.I. AND CERT. SAN. INSP. EXAM. BOARD (LONDON)

J. S. GILHOOLY, CERT. R.S.I. AND S.I.E. JT. BOARD.

S. BAYLIS, CERT. R.S.I.

W. A. PRIEST, CERT. R.S.I.

L. V. AMBLER, CERT. R.S.I. AND S.I.E. JT. BOARD ; R.S.I. MEAT AND FOODS

J. W. DUCK, CERT. R.S.I. ; R.S.I. MEAT AND FOODS

Assistant Sanitary Inspectors

50 AND 4 PUPILS

Special Inspectors

Housing Inspectors

H. PARDOE, CERT. SAN. INSP. EXAM. BOARD (LONDON)

W. BARLOW, CERT. R.S.I.

Senior Smoke and Factories Inspector

G. W. FARQUHARSON, CERT. R.S.I. AND S.I.E. JT. BOARD ; R.S.I. MEAT AND FOODS ; R.S.I. SMOKE

Assistant Smoke and Factories Inspectors

A. RENCH, CERT. R.S.I. AND S.I.E. JT. BOARD (SMOKE)

E. W. HOWARD, 1ST CL. B.O.T. CERT.

Shops Inspectors

W. BESTON

T. INGRAM

A. MULLEN

W. E. LEWIS

Food and Drugs Sampling Officers

J. MARSHALL

J. H. T. KING

H. S. RAWLINS

Milk and Dairies Inspectors

Senior Milk and Dairies Inspector

R. A. HAWKINS

G. E. LEEDHAM, CERT. R.S.I. AND S.I.E. JT. BOARD

S. M. CARRUTHERS, CERT. R.S.I. AND S.I.E. JT. BOARD

H. C. A. WOODWARD, CERT. R.S.I. AND S.I.E. JT. BOARD

Canal Boats Inspector

W. G. E. CHILDS

Lodging House Inspector

A. E. MILLARD

<i>Disinfection, etc., Staff</i>	.	.	.	.	.	22
<i>Court Cleansing Staff</i>	.	.	.	.	.	5
<i>Overcrowding Survey Staff</i>	.	.	.	.	.	13
<i>Clerical Staff</i>	.	.	.	.	.	15

Inspection of Cow Sheds and Dairies and of Meat and other Foods

CARRIED OUT BY THE VETERINARY DEPARTMENT ON BEHALF OF THE PUBLIC HEALTH COMMITTEE

Chief Veterinary Officer

BRENNAN DE VINE, M.C., F.R.C.V.S., D.V.S.M., F.R.S.I.

MATERNITY AND CHILD WELFARE

MEDICAL OFFICERS

Senior Assistant for Maternity and Child Welfare

DR. E. CASSIE, M.D., CH.B., D.P.H.

Assistants for Maternity and Child Welfare (Whole-time)

DR. E. BADENOCH, M.D., CH.B.

DR. M. CALVERT, M.B., CH.B., B.A.O., D.P.H.

DR. U. B. COX, M.R.C.S., L.R.C.P.

DR. V. M. CROSSE, M.D., B.S., D.P.H., M.M.S.A.

DR. M. W. CRUICKSHANK, M.B., CH.B.

DR. J. L. HALLUM, B.SC., M.B., CH.B.

DR. B. HATHERLEY, M.B., CH.B., M.M.S.A.

DR. J. T. HILL, M.B., CH.B.

DR. E. M. HUMPHERSON, M.B., CH.B., M.R.C.S., L.R.C.P.

DR. B. G. JEMSON, M.R.C.S., L.R.C.P., D.P.H.

DR. I. MCKINLAY, M.B., CH.B., D.P.H., L.M.

DR. J. L. McNEILL, M.D., B.CH., B.A.O., L.M.

DR. R. L. MOLLOY, M.B., CH.B., B.A.O., N.U.I.

DR. M. C. O'BRIEN, M.B., CH.B., D.P.H., M.M.S.A.

Part-time Assistant Medical Officers 32

HEALTH VISITORS

Superintendent of Health Visitors

MISS L. B. BAKER, S.R.N., S.C.M., H.V. CERT.

Assistant Superintendent of Health Visitors and Supervisor of Home Helps

MISS F. M. WRIGHT, CERT. INSP. OF NUIS., R.S.I.

Assistant Superintendent of Health Visitors

MISS M. G. MILNER, S.R.N., **S.C.M.**, H.V. CERT.

Tutor for Pupil Visitors

MISS I. H. SINNETT, S.R.N., S.C.M., H.V. CERT.

Superintendents of Centres

<i>Acock's Green</i>	Miss J. E. PROBERT, S.R.N., S.C.M., H.V. CERT.
<i>Bloomsbury Street</i>	Miss F. M. AVERY, S.R.F.N., S.R.N., S.C.M., H.V. CERT.
<i>Bromford</i>	Miss A. GILL, S.R.N., S.C.M., H.V. CERT.
<i>Carnegie</i>	Miss D. F. HOPSON, S.R.N., S.C.M., H.V. CERT.
<i>Erdington</i>	Miss A. FURNISS, S.R.N., S.C.M., H.V. CERT.
<i>Floodgate Street</i>	Miss M. TATTERSFIELD, S.R.N., S.C.M., H.V. CERT.
<i>Glebe Farm</i>	Miss V. W. NOBLE, S.R.N., S.C.M., H.V. CERT.
<i>Greet</i>	Miss A. POLEY, S.R.N., S.C.M., H.V. CERT.
<i>Handsworth</i>	Miss A. VAUGHAN, CERT. INSP. OF NUIS., R.S.I.
<i>Harborne</i>	Mrs. M. DAVIES, C.M.B., QUEEN CHARLOTTE CERT.
<i>Hay Mills</i>	Miss J. M. PEARSON, S.R.N., S.C.M., H.V. CERT.

Superintendents of Centres—*continued*

<i>Hope Street</i>	Miss I. V. WHITEHEAD, S.R.N., S.C.M., H.V. CERT.
<i>Irving Street</i>	Miss R. M. CHILDS, S.R.N., S.C.M., H.V. CERT.
<i>Kettlehouse</i>	Miss A. E. CHARNLEY, S.R.N., S.C.M., H.V. CERT.
<i>King's Heath</i>	Miss E. HILLMAN, S.R.N., S.C.M., H.V. CERT.
<i>Kingstanding</i>	Miss L. PALFREYMAN, S.R.N., S.C.M., H.V. CERT.
<i>Lancaster Street</i>	Miss M. OWEN, S.R.N., S.C.M., H.V. CERT.
<i>Lansdowne Street</i>	Miss R. OWEN, S.R.N., S.C.M., H.V. CERT.
<i>Monument Road</i>	Miss M. COUSINS, S.C.M., CERT. INSP. OF NUIS., R.S.I.
<i>Northfield</i>	Miss D. LEAK, S.R.N., S.C.M.
<i>Selly Oak</i>	Miss E. C. GREAVETT, S.C.M., H.V. CERT.
<i>Stechford</i>	Miss E. HARRISON, S.R.N., S.C.M., H.V. CERT.
<i>Stirchley</i>	Miss W. M. OLIVER, S.R.N., S.C.M., H.V. CERT.
<i>Stratford Road</i>	Miss M. BEATTY, S.R.N., S.C.M., H.V. CERT.
<i>Sutton Street</i>	Miss E. DIGBY, S.R.N., S.C.M.
<i>Tennal Road</i>	Miss D. MALLEY, S.R.N., S.C.M., H.V. CERT.
<i>Trinity Road</i>	Miss N. POWIS, S.R.N., S.C.M.
<i>Walsall Road</i>	Miss E. WILLIAMSON, S.R.N., S.C.M., H.V. CERT.
<i>Washwood Heath</i>	Miss F. M. POOLE, QUEEN'S NURSE, S.R.N., S.C.M., H.V. CERT.
<i>Weoley Castle</i>	Miss K. MILNER, S.R.N., S.C.M., H.V. CERT.
<i>Wright Street</i>	Miss M. A. HADDON, S.R.N., S.C.M.
<i>Yardley Wood</i>	Miss M. R. SIMONS, S.R.N., S.C.M., H.V. CERT.

<i>Assistant Health Visitors attached to Centres</i>	64
<i>Pupils</i>	29
<i>Health Visitors for Infectious Non-Notifiable Diseases</i>	9

Special Staff for Infant Life Protection

Foster Children

Miss N. M. JONES, S.R.N., S.C.M., H.V. CERT.
Miss M. I. FOSTER, S.R.N., S.C.M., H.V. CERT., DIPLOMA OF NURSING, PUBLIC HEALTH

Unmarried Mothers

Miss L. PARKER, S.R.N., S.C.M., H.V. CERT.
--

Supervisors of Midwives

Miss F. M. RALPH, S.R.N., S.C.M.
Miss B. LAWSON, S.R.N., S.C.M., H.V. CERT.
Miss B. V. ADAMS, S.R.N., S.C.M.

<i>Municipal Midwives</i>	97
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<i>Dentists</i>	Mr. R. V. PAYTON, L.D.S. (FULL-TIME)
	Mr. C. T. MORGAN, L.D.S. (PART-TIME)

<i>Nurses :</i>	WHOLE-TIME	1
	PART-TIME	1

<i>Masseuses :</i>	FOR REMEDIAL EXERCISE CLINICS	2
<i>Sewing Instructresses</i>		15
<i>Cooking Instructresses</i>		5
<i>Caretakers and Cleaners</i>		48
<i>Meal Attendants</i>		9
<i>Municipal Kitchen :</i>	COOK	1
	ASSISTANT COOKS	2

CANWELL HALL BABIES' HOSPITAL

Resident Medical Officer

MARY K. McDONALD, M.B., CH.B., B.A.O.

Matron

Miss A. BIRTWISTLE, S.R.N., S.R.C.N., S.C.M., CERTIFICATES FOR HOUSEKEEPING,
COOKERY AND HOSPITAL ADMINISTRATION

CARNEGIE INSTITUTE OBSERVATION WARD

Sister-in-Charge

Miss I. WAITE, S.R.C.N., S.C.M.

WAKE GREEN ROAD MATERNITY HOME

Matron

Miss E. THORNE, S.R.N., S.C.M., H.V. CERT., CERT. INSP. OF NUIS. R.S.I.

HEATHFIELD ROAD MATERNITY HOME

Matron

Miss A. MILLBURN, S.R.N., S.C.M.

PYPE HAYES HALL CONVALESCENT HOME

Matron

Miss C. CROOKE, S.R.N., S.C.M.

LORDSWOOD NURSERY

Matron

Miss D. NEALE, S.R.N., S.C.M.

BOURNE HOUSE HOSTEL

Matron

Miss B. OWEN, S.R.N., C.M.B.

Other Staff

Nursing Staff (including 52 pupils) . . .	123
Domestic Staff	43
Porters, Gardeners, Stokers, Drivers, etc. . .	12
Clerical Staff	9

Diphtheria Immunisation Department

DR. VERA FELLOWES, M.B., CH.B.

Miss H. H. DUFF, M.A., S.R.N., S.C.M.

Miss M. E. BOND, S.R.N., S.C.M., S.R.F.N., H.V. CERT.

Clerical Staff 3

TUBERCULOSIS DEPARTMENT

MEDICAL STAFF

Chief Clinical Tuberculosis Officer

G. B. DIXON, M.R.C.S., L.R.C.P.

Senior Assistant Tuberculosis Officer

J. R. A. D. TODHUNTER, M.B., B.CH., D.P.H.

Superintendents of Sanatoria

Yardley Green Road	G. B. DIXON, M.R.C.S., L.R.C.P.
West Heath	J. M. TAYLOR, M.D.
Romsley Hill	D. J. PEEBLES, M.B., CH.B., D.P.H.
Salterley Grange	A. D. REID, M.B., CH.B.

Assistant Medical Officers	6
Nursing Staff	113
Domestic Staff	58
Porters, Gardeners, Stokers, Drivers	65
Tuberculosis Visitors	10
Clerical Staff	16
Others	12

INFECTIOUS DISEASES HOSPITAL

Medical Superintendent

J. McGARRITY, M.D., CH.B., D.P.H.

<i>Assistant Medical Officers</i>	6
<i>Nursing Staff</i>	164
<i>Domestic Staff</i>	62
<i>Porters, Gardeners, Stokers, Drivers, etc.</i>	51
<i>Others</i>	9

GENERAL HOSPITALS AND CONVALESCENT HOMES

DUDLEY ROAD HOSPITAL (For Acute Sick)

Medical Superintendent

F. W. ELLIS, M.D., F.R.C.S.

Matron

Miss O. M. SNOWDEN, S.R.N., S.C.M., C.S.M.M.G.

Steward

J. BARRON

<i>Medical Staff</i> : WHOLE-TIME	14
PART-TIME	2

SELLY OAK HOSPITAL (For Acute Sick)

Medical Superintendent

R. P. S. KELMAN, M.B., F.R.C.S.

Matron

Miss E. D. POOLE, S.R.N., S.C.M.

Steward

J. PRESTON

<i>Medical Staff</i> : WHOLE-TIME	17
PART-TIME	—

(Also for Selly Oak Infirmary.)

SELLY OAK INFIRMARY (For Chronic Sick)

Medical Superintendent

R. P. S. KELMAN, M.B., F.R.C.S.

Matron

MRS. M. M. EVANS

Steward

J. PRESTON

Medical Staff . . . SAME STAFF AS SELLY OAK HOSPITAL

CONVALESCENT HOMES

Wassell Grove

Matron

Miss V. COLLINS, S.R.N.

Oaklands

Matron

Miss G. KNIGHT, S.R.N., S.C.M., C.N.S.R.

Tower House

Matron

Miss A. E. MONSSON, S.R.N.

Other Staff

<i>Nursing Staff</i>	.	.	.	.	.	.	900
<i>Domestic Staff</i>	.	.	.	.	.	.	262
<i>Porters, Gardeners, Stokers, Drivers</i>	.	.	.	.	.	.	238
<i>Clerical Staff</i>	.	.	.	.	.	.	55
<i>Others</i>	.	.	.	.	.	.	45

VENEREAL DISEASES CLINICS

GENERAL HOSPITAL

Director

E. V. ASSINDER, M.D., B.CH.

Assistant Medical Officers 4

CHILDREN'S HOSPITAL

F. BRAID, M.D., CH.B., M.R.C.P.

LANCASTER STREET

J. H. MORTON, M.D., CH.B., D.P.H.

BIRMINGHAM INFIRMARY

K. M. PEACOCK, M.B., CH.B., D.P.H.

CITY BACTERIOLOGICAL LABORATORY

City Bacteriologist

H. G. M. HENRY, M.D., B.S.

Deputy City Bacteriologist

F. C. LEWIS, M.R.C.S., L.R.C.P.

Assistants and Staff 15

ANALYTICAL LABORATORY

City Analyst

H. H. BAGNALL, B.SC., F.I.C.

<i>Assistant Analyst and Staff</i>	5
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PUBLIC VACCINATION

<i>Public Vaccinators (PART-TIME)</i>	.	.	.	22
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<i>Vaccination Officers (WHOLE-TIME)</i>	.	.	.	5
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WORKS DEPARTMENT

Manager

R. T. COOKE

<i>Assistant Manager and Workmen</i>	.	.	.	66
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<i>Laundry Staff</i>	39
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<i>Clerical Staff</i>	6
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STEWARD'S DEPARTMENT

Steward

F. HILL

<i>Clerical Staff</i>	5
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SECTION A

Statistics and Social Conditions

SUMMARY OF STATISTICS

For the Year 1938

Area (in acres)	51,147
Population (Census, 1931)	1,002,603
Estimated by Medical Officer, 1938	1,048,000
Estimated by Registrar-General, 1938	1,041,000
Total number of houses, including shops, etc., with houses, at October 1st, 1938, according to rate books	288,836
Rateable value (October 1st, 1938)	£7,308,273
Sum represented by a penny rate	£28,518

Extracts from Vital Statistics of the year 1938 :

Births .. Males : 8,655 } Legitimate, 16,350 } Birth-rate, 16·6	
Females : 8,323 } Illegitimate, 628 }	
Stillbirths, 627 : Rate per 1,000 total live and stillbirths ..	35
Deaths, 11,400. Crude Death-rate	10·9
Standardised Death-rate	12·0
Percentage of deaths occurring in public institutions ..	50

Number of women dying in, or in consequence of, childbirth :

From sepsis : Deaths.. .. .	11
From other causes : Deaths.. .. .	38
	—
Total ..	49
	—
From sepsis : Rate per 1,000 live and still births..	0·61
From other causes : Rate per 1,000 live and still births..	2·10
	—
Total ..	2·71
	—

Deaths of infants under one year of age per 1,000 live births :

Legitimate	60
Illegitimate	80
Legitimate and illegitimate	61

Deaths from Cancer	1,667
Deaths from Measles (all ages).. .. .	10
Deaths from Whooping Cough (all ages)	75
Deaths from Diarrhoea (under two years of age)	219

General

The City of Birmingham, with a population of 1,048,000, and an area of 51,147 acres, measuring ten miles from north to south, and a maximum of seven miles from east to west, can be regarded as the capital of the Midlands, besides being the largest and most populous provincial city in England. It is situated in the heart of the Midlands, 110 miles from London. To its south and east it merges into the rural stretches of Worcestershire and Warwickshire. On the north and west it is continuous with the succession of towns and of urbanized country constituting the coal-mining, iron-mining, metal-working "black country" of Staffordshire.

Birmingham is markedly hilly in contour, with a height varying from 254 to 821 feet above sea level (254 feet, bed of River Tame at city eastern boundary ; 564 feet, Island Road, Handsworth ; 736 feet, High Street, Quinton ; 821 feet, near Rednal Hill).

Its northern section is traversed by the River Tame, joined more to the east on its right bank by the smaller River Rea, largely canalized as it travels obliquely from south-west to north-east ; while beyond the city's eastern boundary the Tame is joined by the River Cole after the latter has crossed the eastern districts. The navigable waterways comprise a considerable number of canals used regularly for traffic.

Geology

Birmingham rests on a wide belt of Triassic rock. The districts of Harborne, Handsworth, and part of Aston, lying to the west and north, are situated on Bunter beds of sandstone. The main portion of the city, to the east of this, rests on a broad outcrop of Keuper sandstone, or "waterstone." This forms all the higher ground, and provides a healthy and elevated site for dwellings, valuable originally because so freely supplied with water.

So far as the surface soil is concerned, this consists mainly of boulder clay along its western and northern marches, and of sands and gravels and river alluvium over the remainder of the city area, running again into boulder clay to the south.

Industries

While the Black Country industries, closely related to the mines, have centred mainly round raw materials or the cruder products, those of Birmingham itself, while including these, have inclined towards the manufacture of the highly finished products. The city's industries are exceedingly numerous, more than justifying its popular name of the City of a Thousand Trades. It is the centre of the brass smelting and casting industry, of the jewellery trade, and is the home of many metal industries ; of electro-plating ; of varnish, paint and japanning works ; of small arms, motor cars and bicycles ; of screw, and steel pen and tool works ; of button manufacture ; of various food and condiment works, etc.

1.—POPULATION AND MORTALITY STATISTICS

Population

The Registrar-General estimated the population of Birmingham at 1,041,000 on June 30th, 1938. The local estimate, based on the natural increase due to excess of births over deaths with an allowance for migration, was 1,048,000.

Attention was drawn in the report for 1937 to the fact that the Birmingham population, like that of the country as a whole, is becoming ever an older population with a smaller element of childhood and youth in it, as shown by the steadily dwindling proportion of young children (0-5) and of children of school age (5-15), the substantially constant proportion of young adults and of those of early middle life (15-45), and the marked increase in the proportion of the later middle-aged (45-65) and of the aged. At the same time there is the phenomenon, not as readily detectable in local data, of an approach to a crest of population beyond which there will be a waning.

In view of the importance of the issue I do not hesitate to repeat the comments made last year on these facts. Much discussion is being indulged in, official enquiries are being made, to determine the causes of these serious population changes. While all such investigation is to the good, it is clear that at any rate two factors, likely to be main factors, are at work : that of the national and local public health activities, saving to an older age lives which would otherwise have been cut off earlier ; and that of the widespread application of measures of artificial birth control. This disastrous result should surely be enough to give pause to those who ardently advocate such artificial birth control as an essential part of modern married life. It is remarkable that, with so patent a means of remedying largely if not completely this arrest of population with its altered character, we are nationally further than ever from taking that one step which would at the same time lead to a simpler and healthier married and family life.

Births (see page 33)

Deaths

The deaths belonging to Birmingham numbered 11,400, as compared with 12,199 in 1937 and 11,690 in 1936. Of these deaths 5,951 were of males and 5,449 of females.

The death-rate for 1938 was 10·9. The average for the ten years prior to 1938 was 11·4, while that for 1937 was 11·7.

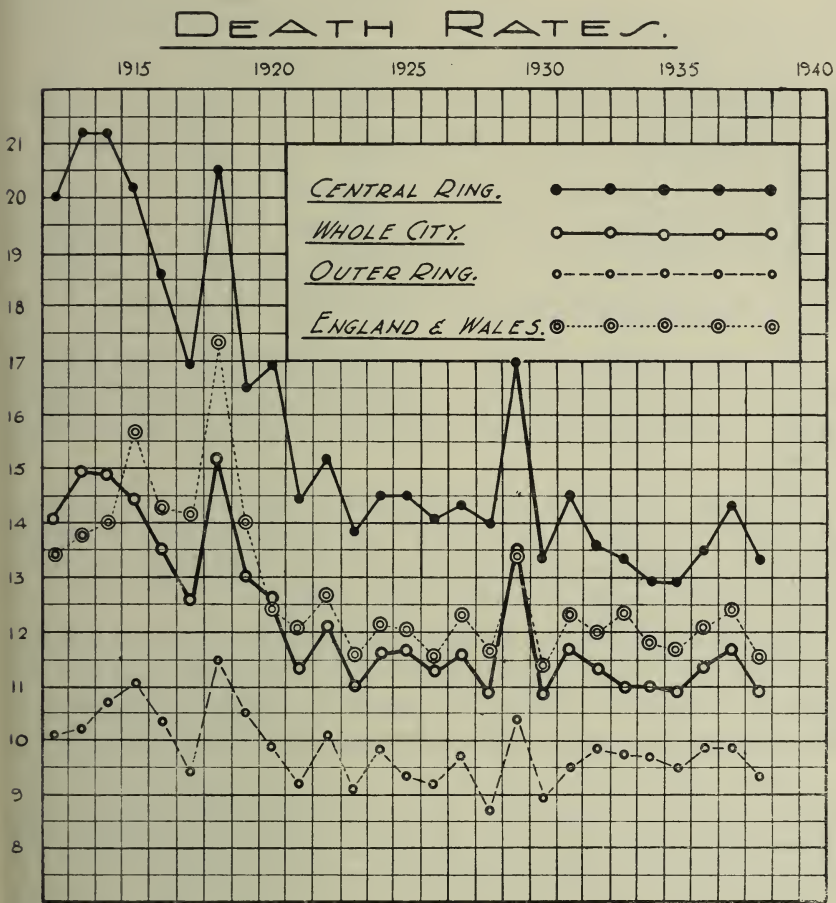
The progress in reduction of the death-rate in England and Wales and in Birmingham during the past sixty-eight years can be seen from the figures below :

DEATH-RATES IN BIRMINGHAM AND ENGLAND AND WALES

	<i>Birmingham.</i>	<i>England and Wales.</i>
1871-1875 (Old City).....	25·2	22·0
1876-1880 " 	22·8	20·8
1881-1885 " 	20·7	19·4
1886-1890 " 	20·2	18·9
1891-1895 " 	20·3	18·7
1896-1900 " 	20·5	17·7
1901-1905 (Present Area).....	16·5	16·0
1906-1910 " 	15·0	14·7
1911-1915 " 	14·6	14·3
1916-1920 " 	13·4	14·4
1921-1925 " 	11·5	12·1
1926-1930 " 	11·6	12·1
1931-1935 " 	11·2	12·0
1927 " 	11·6	12·3
1928 " 	10·9	11·7
1929 " 	13·5	13·4
1930 " 	10·8	11·4
1931 " 	11·7	12·3
1932 " 	11·3	12·0
1933 " 	11·0	12·3
1934 " 	11·0	11·8
1935 " 	10·9	11·7
1936 " 	11·3	12·1
1937 " 	11·7	12·4
1938 " 	10·9	11·6

Up to 1915 the mortality in Birmingham was above that of England and Wales. During the twenty-three years since that date, with two exceptions, it has been below the rate for the country as a whole.

The fluctuations in the death-rate during the past twenty-seven years are shown on the diagram below, which also shows the rates in the Central and Outer Groups of Wards, together with England and Wales.



The following table, setting out the death-rate in 1938 for the eleven largest towns in the United Kingdom, arranged in size, indicates that, despite its size, Birmingham occupies a favourable position among them :

COMPARATIVE DEATH-RATES IN ELEVEN LARGEST TOWNS

	Per 1,000.		Per 1,000.
London	11.4	Leeds	12.7
Glasgow	13.3	Edinburgh	12.7
Birmingham	10.9	Bristol.....	11.7
Liverpool	12.3	Hull.....	12.2
Manchester.....	12.3	Bradford.....	13.8
Sheffield	11.4		

Mortality by Age and Sex

The deaths at different age periods were as follows :

	<i>Males.</i>	<i>Females.</i>	<i>Persons.</i>
Under 1 year	607	461	1,068
1 and under 2	55	61	116
2 and under 5	54	44	98
5 and under 15	113	117	230
15 and under 25	216	169	385
25 and under 45	594	520	1,113
45 and under 65	1,807	1,289	3,096
65 and under 75	1,442	1,247	2,689
75 and upwards	1,064	1,541	2,605

The deaths at ages over sixty-five years, numbering 5,294 out of a total of 11,400, are largely to be regarded as in the natural order of things. The remaining half of the deaths may be looked on as potentially avoidable.

Even under our present limited knowledge and power, the deaths at ages below sixty-five years contain large groups capable of marked reduction, granted healthy conditions of life and whole-hearted co-operation by the public in living the healthy life.

Included among these potentially avoidable deaths are 1,068 deaths *under one year of age*, and a further 214 deaths between one and five years. The causes of mortality in these groups are set out in detail in the section of this report on Maternity and Child Welfare (page 32).

Among *school children (five to fifteen years)* the largest individual causes of death were diphtheria (38) and accidents (33), while nervous diseases (26), heart disease (22), pneumonia (20), and tuberculosis (18) were responsible for a not inconsiderable mortality at this age.

Among *young people between fifteen and twenty-five years* there were 385 deaths (seven per week on an average), of which 156 were due to tuberculosis.

In *early adult life (twenty-five to forty-five years)* 1,113 deaths occurred. At this age period also tuberculosis heads the list of diseases with 296 deaths.

In *later adult life (forty-five to sixty-five years)* the largest number of deaths was caused by heart and circulatory diseases (883), cancer being second (688 deaths), respiratory diseases third (343), and tuberculosis fourth with 260.

Fuller details as to the causes of death at different age periods and in the two sexes are given in Table II at the end of this report.

Infant Mortality (see page 38)

Death-rates in Wards

In 1938 the death-rates in the different Wards were as set out below. As in previous years there continue to be marked differences in the death-rates in the various Wards of the City :

DEATH-RATES IN WARDS, 1938

<i>Central Wards.</i>	<i>Middle Ring.</i>	<i>Outer Ring.</i>
St. Paul's 13·4	Lozells 12·7	Soho..... 13·4
St. Mary's 14·0	Aston 12·1	Sandwell 11·5
Duddeston and Nechells 13·1	Washwood Heath 9·3	Handsworth 12·5
St. Bartholomew's 11·7	Saltley 10·2	Perry Barr 6·1
St. Martin's and Deritend 14·6	Small Heath 11·4	Erdington 9·8
Market Hall 13·0	Sparkbrook 12·5	Gravelly Hill 8·3
Ladywood 13·2	Balsall Heath.... 13·6	Bromford..... 9·1
	Edgbaston 11·2	Stechford..... 8·2
	Rotton Park 13·2	Yardley 8·4
	All Saints 12·3	Acocks Green.... 8·6
		Hall Green 7·8
		Sparkhill 12·5
		Moseley and King's Heath 11·8
		Selly Oak 10·3
		King's Norton .. 9·6
		Northfield 7·3
		Harborne..... 9·3
Average 13·3	Average 11·8	Average 9·3

In November, 1934, many alterations were made in the boundaries of the Wards of the City, making it impossible to compare rates for individual Wards in years subsequent to that date with those in earlier years. It is, however, roughly correct to compare the total figures for the Central, Middle Ring and Outer Ring of Wards with those for previous years. The mean death-rates for the three groups are given as follows :

	<i>Central Wards.</i>	<i>Middle Ring.</i>	<i>Outer Ring.</i>
1930.....	13·3	10·8	8·9
1931.....	14·5	12·3	9·5
1932.....	13·6	11·7	9·8
1933.....	13·3	11·4	9·7
1934.....	12·9	12·0	9·6
1935.....	12·9	11·6	9·5
1936.....	13·5	12·2	9·8
1937.....	14·3	13·0	9·8
1938.....	13·3	11·8	9·3

The diagram on page 7 shows the death-rate during the past twenty-seven years in the City as a whole contrasted with that of the Central Wards and of the Outer Ring and England and Wales. It will be noted that the mortality in the Central Wards is much nearer to that of the whole City than it was twenty-seven years ago. Nevertheless, the difference between the Central and the Outer Wards is still great. In 1938 there were 2,498 deaths in the Central Wards. If the death-rate in them had been as low as it was in the Outer Ring 751 of these deaths would have been avoided.

In the next table the mortality from some of the more prominent causes of death is shown for the three groups of Wards.

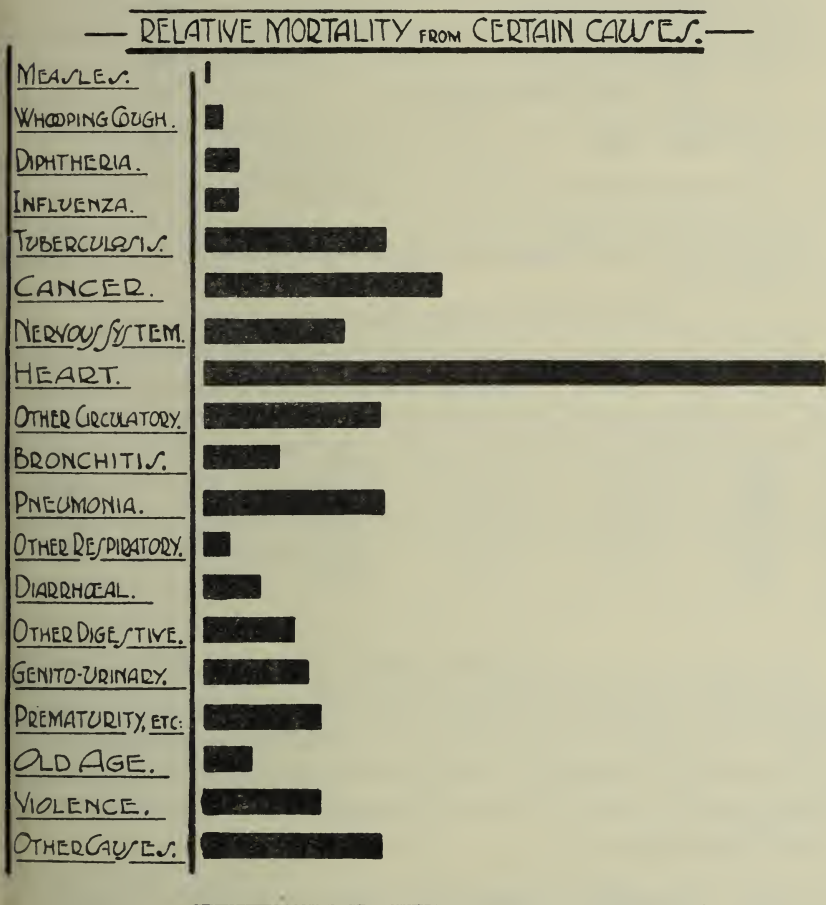
DEATH RATES IN GROUPS OF WARDS, 1938.

	<i>Central Wards.</i>	<i>Middle Ring.</i>	<i>Outer Ring.</i>	<i>City.</i>
Measles	·02	·01	·01	·01
Whooping Cough	·13	·07	·05	·07
Diphtheria	·10	·05	·07	·07
Influenza	·09	·20	·15	·15
Tuberculosis of Respiratory System	1·03	·66	·59	·70
Other Forms of Tuberculosis	·10	·05	·08	·08
Cancer : Malignant Disease	1·80	1·91	1·33	1·59
Diseases of Nervous System and Sense Organs....	·74	·67	·52	·61
Diseases of Heart.....	3·20	3·15	2·22	2·70
Other Diseases of Circulatory System.....	1·11	·80	·58	·75
Bronchitis	·44	·32	·25	·31
Pneumonia : All Forms	1·03	·77	·67	·77
Other Diseases of Respiratory System.....	·06	·12	·09	·10
Diarrhœa and Enteritis	·46	·19	·17	·23
Other Diseases of Digestive System.....	·46	·36	·35	·37
Non-Venereal Diseases of Genito-urinary System..	·43	·51	·38	·43
Premature Birth and Diseases of Early Infancy..	·54	·46	·48	·49
Old Age	·23	·21	·16	·20
Violence : All Forms	·50	·52	·46	·49
Other Causes	·83	·82	·69	·76

In almost every instance the mortality is higher in the Central Wards than in the Outer Ring. This excessive mortality is very noticeable in the case of pneumonia and tuberculosis. In the case of pneumonia, the deaths last year in the Central Wards numbered 194. If the mortality had been no higher than in the Outer Ring they would have numbered 126, a saving of 68 lives.

Principal Causes of Death

Particulars of the deaths from individual causes at different age periods and in the two sexes are set out in Table II at the end of this Report. The relative mortality attributable to some of the more important of these causes is shown in the diagram below.



The statistics relating to infectious diseases (including tuberculosis) are dealt with in detail in Section F of this Report, and those relating to diarrhoea, prematurity, and other infantile complaints in Section B.

Cancer

The deaths from cancer numbered 1,667, as compared with 1,692 in 1937. The part of the body primarily affected was as follows :

Buccal cavity and pharynx	89
Digestive organs and peritoneum	880
Respiratory organs	185
Female genital organs	140
Breast	178
Male genito-urinary organs	97
Skin	8
Other organs	90

The death-rate in Birmingham and in England and Wales is shown in the table below :

DEATH-RATE PER 1,000 FROM CANCER

	<i>Birmingham.</i>	<i>England and Wales.</i>		<i>Birmingham.</i>	<i>England and Wales.</i>
1929 ..	1·34	1·44	1934 ..	1·43	1·56
1930 ..	1·43	1·45	1935 ..	1·52	1·59
1931 ..	1·46	1·48	1936 ..	1·57	1·62
1932 ..	1·45	1·51	1937 ..	1·62	1·63
1933 ..	1·43	1·53	1938 ..	1·59	—

The death-rates for individual Wards are here of no value. The average death-rate in 1938 for the Central Wards was 1·80, for the Middle Ring of Wards 1·91, and for the Outer Ring 1·33. It has to be remembered that the Outer Ring, containing as it does the majority of the housing estates, is likely thereby to have a younger population, with, consequently, a lower cancer death-rate.

Facilities available for the Diagnosis and Treatment of Cancer

Facilities provided by the Local Authority.

At Dudley Road Hospital a Deep X-ray Therapy Department has been under active operation for the past fifteen years. Two theatres are provided for the treatment of cases, fitted with a Stabilivolt machine (200 k.v.) and a neo-intensive machine (180 k.v.) respectively. Four beds for men and four for women are provided regularly for in-patient treatment, and others utilised as necessary.

Radon is obtained from the Birmingham University. Cases considered suitable for radium treatment are referred to the Radium Centre at the Birmingham General Hospital.

The Public Health Committee continue to pay an annual contribution of £250 to the Birmingham Branch of the British Empire Cancer Campaign in support of their work on cancer research.

Facilities provided by the Radium Centre and Voluntary Hospitals.

The Birmingham General Hospital in conjunction with the University became one of the National Radium Centres in 1930. There are thirty-two beds available for cancer treatment at that hospital. The radiation therapy comprises treatment by radium and by X-ray.

Radium beam therapy is now available at the General Hospital, the apparatus at present containing three grammes.

In 1938 there were 4·154 grammes of radium at the Birmingham General Hospital, and ·37 grammes at the Queen's Hospital, together with ·3 grammes at the Women's Hospital and 41·4 milligrammes at the Children's Hospital.

In connection with the National Radium Centre a radon service has been established at the Birmingham University supplying radon to a large number of hospitals within a radius of about forty miles.

An X-ray therapy service is provided at the General Hospital. The apparatus comprises four deep therapy sets and one Chaoul set. The facilities for X-ray therapy are available also for patients from the Queen's Hospital, while there is free interchange of patients between the voluntary and municipal hospitals in respect of both X-ray and radium treatment.

Diseases of the Heart and Blood Vessels

There were 3,616 deaths from these diseases as compared with 3,551 in 1937. The death-rates during the past ten years have been as follows :

	<i>Birmingham.</i>	<i>England and Wales.</i>		<i>Birmingham.</i>	<i>England and Wales.</i>
1929 ..	2·76	3·06	1934 ..	3·04	3·33
1930 ..	2·57	2·83	1935 ..	3·14	3·46
1931 ..	2·90	3·14	1936 ..	3·43	3·78
1932 ..	2·73	3·18	1937 ..	3·40	3·83
1933 ..	2·94	3·30	1938 ..	3·45	—

The death-rates in Birmingham are somewhat below those in England and Wales. Of the total deaths 24·4 per cent occurred between the ages 45-65, 32·9 per cent between 65-75, and 36·5 per cent at ages over 75.

In relation to ward distribution the death-rate during 1938 in the Central Wards was 4·31, the Middle Ring of Wards was 3·95, and the Outer Ring of Wards was 2·80.

Bronchitis, Pneumonia and other Respiratory Diseases

The mortality from these diseases varies greatly from year to year, being influenced markedly by weather conditions and by the prevalence of such diseases as influenza, measles or whooping-cough. In 1938 the mortality was the lowest in the last ten years, with the exception of that for 1935.

The mortality in recent years has been as follows :

	<i>Birmingham.</i>	<i>England and Wales.</i>		<i>Birmingham.</i>	<i>England and Wales.</i>
1929 ..	2.26	2.10	1934 ..	1.26	1.24
1930 ..	1.32	1.30	1935 ..	1.09	1.16
1931 ..	1.61	1.60	1936 ..	1.22	1.23
1932 ..	1.47	1.36	1937 ..	1.40	1.27
1933 ..	1.32	1.39	1938 ..	1.18	—

Unlike heart disease, respiratory diseases generally cause a somewhat higher mortality in Birmingham than in England and Wales as a whole. A considerable part of the mortality occurs in early life, the deaths last year being distributed as follows :

	<i>No. of Deaths</i>	<i>Per Cent.</i>		<i>No. of Deaths</i>	<i>Per Cent.</i>
Under 1 year.....	180	14.6	25 and under 45 years..	132	10.7
1 and under 2 years..	42	3.4	45 " 65 " ..	343	27.9
2 " 5 " ..	18	1.4	65 " 75 " ..	230	18.6
5 " 15 " ..	22	1.8	75 and over.....	238	19.3
15 " 25 " ..	28	2.3	All Ages	1,233	—

The death-rates in the several areas of the City in 1938 were as follows : Central Wards, 1.53 ; Middle Ring, 1.21 ; Outer Ring, 1.01.

It will be seen that respiratory diseases are much more common as a cause of death in the Central Wards than elsewhere.

SECTION B.

**General Provision of Health
Services**

SECTION B.

GENERAL PROVISION OF HEALTH SERVICES

1. Public Health Officers.

See list at beginning of Report (pp. xi—xviii).

The staff may be summarized as follows :

General Central Staff, including Central Clerical and Financial Staff	70
Sanitary Department	144
Maternity and Child Welfare Department	564
Tuberculosis Department	286
Infectious Diseases Staff	293
General Hospitals and Convalescent Homes Staff	1,543
Works Department	112
Bacteriological Department	17
Analytical Department	6
Public Vaccination	27
Steward's Department.. .. .	6

Inspection of cowsheds and dairies and of meat and other foods is carried out by the Veterinary Department on behalf of the Public Health Committee.

Venereal Diseases Clinics are held at four centres, under the directorship of a medical officer at the General Hospital.

New Legislation in Force

The following new legislation coming into force during the year ending 31st December, 1938, was delegated to the Public Health and Maternity and Child Welfare Committee :

Section 233 of the Public Health Act, 1936, was delegated to the Public Health and Maternity and Child Welfare Committee in place of the Baths Committee.

The appropriate Sections of the Blind Persons Act, 1938, in operation as from 1st April, 1938.

The appropriate Sections of the Factories Act, 1937, in force as from the 1st July, 1938.

The Public Health (Aircraft) Regulations, 1938, made by the Minister of Health under Section 143 of the Public Health Act, 1936, in force as from 1st July, 1938.

The appropriate Sections of Increase of Rent and Mortgage Interest (Restrictions) Act, 1938, in force as from 26th May, 1938.

The appropriate Sections of Young Persons (Employment) Act, 1938, Part II, in force as from 1st January, 1939.

2. General Services.

(a) Laboratory facilities

I—City Bacteriological Laboratory

The laboratory, under Dr. H. Henry as Director, occupies the top floor, and its animal house the flat roof, of a building erected in Great Charles Street in 1932, and shared, as to the other floors of that building, with the City Analyst's Department and the Anti-Tuberculosis Centre.

The bacteriological laboratory deals with public health specimens of all types; with the supply of outfits to practitioners; with the preparation of measles prophylactic serum; and with the storage and supply on request of diphtheria antitoxin, and of various sera requiring cold storage.

The work done in the City Bacteriological Laboratory is set out in the statement below :

	<i>No. of Specimens.</i>
Diphtheria Swabs :	
(a) For Practitioners	6,743
(b) For Fever Hospitals	8,563
(c) For Virulence Test.....	2,758
Fæces	1,233
Milks	783
Milk for Tuberculosis	2,510
Hæmolytic Tests	202
Sputum for Tuberculosis	2,573
Shell-fish	64
Water Samples	1,295
Vaccines Prepared	1
Widal's Reaction	1,142
Miscellaneous	9,223
Venereal Diseases :	
Blood for Wassermann Reaction.....	18,577
Cerebro-spinal Fluid—	
(a) For Wassermann Reaction	595
(b) For Cell Count	182
Serum for Spirochætes	1
Films for Gonorrhœa.....	14,457
Urine Examinations :	
(a) Microscopic	4
(b) Chemical	297
Gonococcal Fixation Tests	3,554
Vaccines Prepared	524
Cultures Prepared	13,683
Van den Bergh's Tests	558
Sigma Reaction	638
Miscellaneous	2
TOTAL	90,162

II—City Analytical Laboratory

The City Analytical Laboratory, under the direction of the City Analyst, Mr. Bagnall, occupies the second floor of the building in Great Charles Street referred to in the preceding paragraph.

The following statement indicates the samples analysed in the City Analyst's Department :

	1938.
<i>Samples Analysed :</i>	
Food and drug samples	5,610
Soot gauge samples	24
Fertilisers and feeding stuffs.....	21
Miscellaneous samples	1,692
TOTAL	7,347
<i>Samples Adulterated, etc. :</i>	
Samples adulterated with preservatives only ..	11
Samples adulterated in other ways.....	328
Unmarked or improperly marked margarine..	2
False labels	8
Number of vendors of incorrect samples.....	217
Number of prosecutions	22
Number of fines	20
Amount of fines and costs	£86/16
Number of cautions	294

Details of this work are given in the Report of the City Analyst, printed separately.

III—Hospital Laboratories

Laboratories, appropriate to the size and purpose of the institution, are provided at :

- Dudley Road Hospital : General and Biochemical.
- Selly Oak Hospital : General and Biochemical.
- Little Bromwich Hospital : Bacteriological, Infectious Diseases.
- Yardley Green Road Sanatorium : Bacteriological, etc., Tuberculosis.
- Carnegie Institute : General and Biochemical.

(b) Ambulance Services

The Public Health Committee have four ambulances for acute infectious diseases (Little Bromwich Hospital) ; two for tuberculosis ; and seven for acute or chronic general disease (five at Dudley Road Hospital, two at Selly Oak Hospital).

The Watch Committee have nine police ambulances for accidents and other casualties.

An ambulance service of seventeen ambulances is maintained for general purposes by the Birmingham Hospitals Contributory Association in conjunction with the St. John Ambulance Brigade, subject to payment according to means by the patient, and the payment of the balance up to 10s. per case by the local authority.

There are also ambulances at certain of the large voluntary hospitals and at certain works.

(c) Nursing in the Home

Arrangements have been in force, over a period of years, for the home nursing of a number of conditions by the district nurses of the Birmingham District Nursing Association. The following cases were thus nursed during 1938 :

Measles	16
Measles with whooping cough	2
Whooping cough with pneumonia	8
Whooping cough	5
Pneumonia	751
Puerperal pyrexia	167
Puerperal pyrexia with pneumonia	2
Pemphigus	3
TOTAL	954

Apart from hospital treatment, cases of **ophthalmia neonatorum** and of other forms of ophthalmia or eye injury capable of leading to blindness are visited in their homes, as far as necessary, by nurses from the Eye Hospital, an annual grant being paid to the hospital in respect of this service.

Removal of aged and infirm

During 1938 fifty-four cases were investigated with a view to making use of Section 38 of the Birmingham Corporation (General Powers) Act, 1929, as compared with forty cases in 1937, thirty cases in 1936, and twenty-five cases in 1935. Of these, twenty-two were males and thirty-two females. Twenty-seven of the cases were voluntarily admitted to institutions or otherwise relieved, and twenty-five failed to fulfil the

requirements and conditions of the section. In two cases it was found necessary to obtain a magistrate's order for removal to an institution.

Five cases were reported requiring removal to an institution to allow of cleansing, etc., but the necessary improvement was obtained without having recourse to action under Section 48 of the Birmingham Corporation Act, 1935.

(d) **Treatment Centres and Clinics**

Anti-Tuberculosis Centre. (See page 227)

Maternity and Child Welfare Centres. (See p. 61)

Public Dispensaries (Voluntary)

Dispensaries for the treatment of the sick poor are provided by five different voluntary societies in the city, chief among which is the Birmingham General Dispensary. This latter with different branches affords help to some 56,500 cases annually, while the others provide treatment in a lesser proportion.

(e) **Hospitals**

General

The annual report for 1936 contained particulars of a hospital survey of the city. No alteration in the position has occurred since then, apart from the extensions mentioned on p. 30 relating to voluntary hospitals.

The part which the hospitals—voluntary and municipal—play in the treatment of sickness may be inferred in some degree from the fact that last year 5,747 deaths out of a total of 11,400 occurred in hospitals and kindred institutions. Details of these deaths are as follows :

Dudley Road Hospital	1,260
Selly Oak Hospital	580
Selly Oak Infirmary	679
General Hospital	348
Queen's Hospital	212
Children's Hospital	185
Women's Hospital and Taylor Home	62
Maternity Hospital	35
City Fever Hospitals, Babies' Hospital and Maternity Homes ..	247
City Mental Hospitals	142
City Sanatoria	312
Birmingham Infirmary	1,015
Erdington House	327
Private Hospitals	132
Other Hospitals	42
Institutions outside the City	169

PUBLIC GENERAL HOSPITALS

General Statistics

The statistics relating to the work of Dudley Road and Selly Oak Hospitals and Selly Oak Infirmary are given below.

(a) IN-PATIENTS

	<i>Acute Sick.</i>		<i>Chronic Sick.</i>
	<i>Dudley Rd. Hospital.</i>	<i>Selly Oak Hospital.</i>	<i>Selly Oak Infirmary.</i>
Total number of admissions (including infants born in hospital)	16,520	10,923	2,406
Number of women confined in hospital	1,454	976	—
Number of live births	1,421	955	—
Number of stillbirths	72	41	—
Number of deaths among the newly-born (under four weeks)	74	55	—
Number of maternal deaths (confined in hospital)	12	6	—
Total number of deaths	1,298	605	699
Total number of discharges (including infants born in hospital)	15,274	10,351	1,737

(b) OUT-PATIENTS

	<i>Acute Sick.</i>		<i>Chronic Sick.</i>
	<i>Dudley Rd. Hospital.</i>	<i>Selly Oak Hospital.</i>	<i>Selly Oak Infirmary</i>
Number of persons seen in out-patient department	31,100	15,658	<i>Run in conjunction with Selly Oak Hospital.</i>
Total number of attendances	136,832	74,598	
Number of women seen at ante-natal clinic	1,333	980	
Total attendances	4,015	4,347	

(c) CLASSIFICATION OF IN-PATIENTS DISCHARGED OR DIED

	<i>Acute Sick.</i>		<i>Chronic Sick.</i>
	<i>Dudley Rd. Hospital.</i>	<i>Selly Oak Hospital.</i>	<i>Selly Oak Infirmary.</i>
(a) Acute infectious diseases	242	44	24
(b) Influenza	70	21	6
(c) Tuberculosis :			
Pulmonary	158	32	6
Non-pulmonary	64	28	6
(d) Malignant disease	413	178	172
(e) Rheumatism :			
(1) Acute rheumatism (rheumatic fever), together with sub-acute rheumatism and chorea	437	149	29
(2) Non-articular manifestations of so-called "rheumatism" (muscular rheumatism, fibrositis, lumbago, and sciatica)	90	11	6
(3) Chronic arthritis	43	57	43
(f) Venereal disease	26	11	1
(g) Puerperal pyrexia	60	24	—
(h) Other diseases and accidents connected with child-bearing	1,077	626	—
(i) Mental diseases	26	17	17
(j) Senile decay	3	5	106
(k) Violence	1,979	1,151	72
In respect of cases not included above :			
(l) Diseases of the nervous system and sense organs	364	175	218
(m) Diseases of the respiratory system	2,181	823	367
(n) Diseases of the circulatory system	613	316	330
(o) Diseases of the digestive system ..	3,410	2,896	374
(p) Diseases of the genito-urinary system	1,094	797	80
(q) Diseases of the skin	652	461	84
(r) Other diseases	497	1,113	342
(s) Maternity cases (mothers and babies)	2,994	1,869	47
(t) Any persons not falling under above headings	79	152	106

Dudley Road Hospital

This is a municipal general hospital for the acute sick, and is situated in the north-western portion of the city. Erected in 1887, this building is on the pavilion system, with eleven blocks of three storeys extending at right angles from a main corridor running from north to south. These eleven blocks together with four separate units, originally provided an accommodation of 1,500 beds, the numbers remaining unchanged till the outbreak of the Great War.

From March, 1915, till April, 1920, it was used entirely as a military hospital. Re-opened as an acute general hospital in April, 1920, it now contains 912 beds divided as follows :

	<i>Men.</i>	<i>Women.</i>	<i>Children.</i>
Medical	140	168	164
Surgical	144	108	32
Gynæcological	—	68	—
Isolation.....	—	—	18
Maternity	—	50	—
Bay for Sick Staff....	—	20	—
TOTAL.....	284	414	214

The Pathological Block was rebuilt in 1929, and contains also the Bio-chemical Department. At the same time a large extension was made to the nurses' home.

One of the separate buildings—the Maternity Department—is being replaced by a new Maternity Block which is now approaching completion.

Plans are now being prepared for a new Out-patient Department and a new X-ray Department, both having quite outgrown their present accommodation.

Illness has prevented Dr. F. W. Ellis, the Medical Superintendent, from himself submitting the annual review of the Hospital's activities. The following particulars are therefore submitted on his behalf. It is with the deepest regret that, in the page proof as it comes from the printers there must be added the further melancholy news that that illness has ended fatally, to the deep loss of the hospital and the service. Reference to that loss is made in the introduction to this report.

Admissions

During the past year as a Municipal General Hospital dealing with acute medical and surgical cases, we have been more actively employed than

ever before. The total number of admissions for the year was 16,520, which is 1,792 above that for 1937 and 1,522 more than any year since 1929.

Included in the above figure we had 1,678 patients transferred from the voluntary hospitals, nearly half of which were cases of accidental injury and violence.

The average length of stay in hospital has been reduced by approximately one day since 1936, and at present is 17·9 days. It is obvious that the average stay in hospital should not be reduced at the expense of the patients whose home conditions require to be considered, otherwise relapse and recurrence of illness is likely to arise.

It is significant that the mortality rate, reckoned as the number of deaths to the total cases treated, has in spite of our considerably increased numbers, been slightly reduced in 1938. For comparison, in 1936 the mortality rate was 8·56, in 1937 8·68, and in 1938 7·83.

New Treatment of Pneumonia

The introduction of the new sulphanilamide derivative, popularly known as " 693 " M & B, through the work of Dr. G. M. Evans and Dr. W. F. Gaisford in the treatment of pneumonia in March, 1938, and its subsequent general employment in the hospital, has had a favourable influence on this disease, and our results are most encouraging.

Three hundred and fifty cases of pneumonia treated by " 693 " M & B in the current year, showed a mortality rate of 7 per cent. This compares very favourably with the previous mortality rate of 25 per cent estimated here for this disease treated by other methods.

Further researches are being undertaken with this new drug.

Surgical Unit

A new surgical unit composed of three super-imposed and well-equipped theatre suites, was opened in September. The new arrangements have already proved their value by increasing the ease and efficiency of surgical work, at the same time improving the comfort of patients who now occupy the wards in the immediate vicinity and are thus saved unnecessary and trying journeys by lift and stretcher.

The alternative lighting system installed in the new theatres was recently brought into sudden use through a temporary failure of the central electric supply. The surgeons were able to continue their work without interruption or discomfort.

Maternity Department

The new Maternity Department is nearing completion and it is certain that when the building is available the patients will benefit by having greatly increased comfort and improved nursing facilities.

A junior medical officer with special maternity experience has been appointed to assist the senior obstetrician.

Out-patient and X-ray Department

We still await a new Out-patient and X-ray Department, which have long outgrown their present accommodation, and the patients along with medical and nursing staff suffer in consequence.

National Crisis

In the national crisis in September all available accommodation was put into use, and arrangements made which we hoped would have worked efficiently for evacuating the hospital.

We gained some useful information concerning the " gaps " existing in our present service, which, we hope, will be met before a grave contingency should arise.

Since the crisis the hospital and grounds have been surveyed by Colonel Ward, the Ministry's Hospital Officer, and available accommodation re-tabulated.

The equipment lists and details of structural alterations required in the new survey have been submitted to Colonel Ward.

Nursing Staff

The recruiting of nurses is still causing some concern. During the past year the age of entry for probationers has been lowered from twenty to 18½ years.

Selly Oak Hospital

This is a municipal general hospital for the acute sick, and is pleasantly situated on the border of Bournville. The hospital has 520 beds, classified as follows :

- General Medical Wards.
- General Surgical Wards.
- General Children's Wards.
- Male Urological Ward.
- Fracture Ward.
- Gynæcological Ward.
- Ear, Nose and Throat Wards.
- Maternity Department.
- Staff Sick Bay.

The first buildings were erected in 1897, and the last addition to the patient accommodation was in 1909. The most recent building erected is the Pathological and Bio-chemical Block (1934).

The Institution was originally built as the Infirmary to the adjoining Selly Oak House.

At the beginning of 1937 the City Council gave authority for the provision of 120 additional beds, in part to remove acute cases occupying some 100 beds in Selly Oak Infirmary, and in part to provide a cubicled isolation ward. These additional beds were to be provided in the form of :

- (a) a three-storey extension of "A" Block, to give an addition of twenty-eight beds on each storey (total, eighty-four beds), together with an operating theatre for ear, nose and throat cases ; and
- (b) a cubicle isolation ward of thirty-six beds.

Report of the Medical Superintendent, MR. R. P. S. KELMAN.

It is pleasing to report that the total number of in-patients treated for the year (10,923) is 161 less than for the previous year. This figure is still much too high for the accommodation available and has been reached only by considerable overcrowding. The average duration of stay of patients in the hospital for the year was 17·66 days. This is a low figure, since, on analysis, 14 per cent of cases remained in hospital over four weeks. The average occupied beds was 498 and the numbers fluctuated from 559 on the 12th March, 1938, to 385 on the 24th December, 1938.

The high pressure at which the hospital is running prevents an organized system of ward-admitting being adhered to, since patients have to be admitted where beds are vacant. It is satisfactory to know that, in the interim period, during which the extensions sanctioned are being erected, there will be relief by utilization of certain beds in the Queen Elizabeth Hospital and also, through the Education Department, of thirty-four beds for convalescent aural cases in Shenley Fields Home.

There have been several changes in the staff during the year. Dr. O. Hooper, who commenced duties in 1922, retired in May, and Miss M. Wilson (Matron), who had been on the staff since 1916, retired in September. Both these officers are much missed and carry with them our best wishes for a happy retirement. It was a great pleasure to us all to have Miss E. D. Poole appointed as Matron. Miss Poole took over her new duties at an anxious and difficult period and has already fully justified her appointment.

The usual clinical meetings of the Selly Oak Hospital Medical Society have been held throughout the year, and the University of Birmingham Medical Society and the Pathological and Clinical Section of the British Medical Association met at Selly Oak Hospital on 16th February and 28th October respectively.

The following figures show the work of some of the special departments :

<i>Pathological Department :</i>	
Examinations	19,141
Autopsies	357
<i>Bio-chemical Department :</i>	
Examinations	5,624
<i>Radiological Department :</i>	
Radiological examinations	23,711
Fluoroscopic examinations	1,035
Films used	21,352
<i>Massage and Electro-therapeutic Department :</i>	
Cases	5,600
<i>Dental Department :</i>	
Attendances	3,029

Selly Oak Infirmary

This institution of 670 beds adjoins Selly Oak Hospital and is for the accommodation of the chronic sick of both sexes of all ages.

The Infirmary was commenced in 1871 to take the place of the workhouse at the village green of King's Norton. Various extensions were added from time to time, the most notable being that of Block 5 (1900), which now accommodates 170 female patients. With the formation of the Birmingham Union (1912) the character of Selly Oak Infirmary gradually changed from that of a workhouse into that of an institution for the chronic sick.

Report of the Medical Superintendent, MR. R. P. S. KELMAN.

The following are some statistics showing the work done :

Total admissions.....	2,406
Average daily occupied beds.....	654
Highest number of occupied beds on any one day.....	721
Lowest number of occupied beds on any one day.....	568

It cannot be emphasised sufficiently that the nursing of the chronic sick requires a high standard of nursing together with infinite patience. It is hoped that the time will not be far distant when a system of training in chronic nursing can be established in Selly Oak Infirmary. The smooth running of Selly Oak Infirmary is a tribute to the staff.

GENERAL CONVALESCENT HOMES

WASSELL GROVE CONVALESCENT HOME

This Home, previously a large private residence, was acquired in August, 1914, and is used for convalescent women and children.

It is situated on the Clent Hills, Worcestershire, and surrounded by its own grounds and gardens and has accommodation for twenty-eight women and fifteen children under the age of sixteen. It is under the direction of the Medical Superintendent of Dudley Road Hospital, through whom admissions are arranged from Dudley Road and Selly Oak Hospitals and from the Public Assistance Relief Department.

The Home has been open throughout the year. The total number of admissions was 591, as compared with 582 during the year 1937.

Of the 591 admissions, 135 were out-relief cases, 258 from Dudley Road Hospital, and 177 from Selly Oak Hospital.

The discharges from the Home were 592 and included 189 women fit for work, 104 women improved, 211 children quite well, and 39 children improved.

During the year the daily average was thirty-one, and the lowest number of patients in the Home on any one day was fifteen during the month of December.

OAKLANDS CONVALESCENT HOME

This Convalescent Home, formerly a private house, is situated on the main Worcester Road about one mile from Droitwich and, prior to its purchase by the Birmingham Board of Guardians in 1924, was used by the Ministry of Pensions for ex-Service men needing brine bath treatment. The Board of Guardians opened the Home with thirty beds as a Convalescent Home for Men. Later it was decided that the Home be used also for boys.

The Home now has accommodation for forty-one men and boys, and is under the direction of the Medical Superintendent of Selly Oak Hospital, through whom admissions are arranged from Dudley Road and Selly Oak Hospitals and the Public Assistance Relief Department.

Report of the Medical Superintendent, MR. R. P. S. KELMAN.

The great value of this Convalescent Home is that, being definitely attached to the municipal hospitals, there is complete co-operation, thereby eliminating any delay in the transfer of suitable patients.

The admissions of men and boys for the year totalled 509, and the conditions for which treatment was continued at the Home were as follows :

Pneumonia	192
Rheumatism.....	85
Debility.....	69
Gastric and duodenal ulcer.....	42
Bronchitis.....	23
Various post-operative cases.....	35
Empyema.....	16
Diabetes	3
Cardiac conditions	21
Nephritis	23
TOTAL	509

• TOWER HOUSE

This large private house and grounds, situated in the southern rural outskirts of Birmingham, immediately adjacent to the large Barnt Green reservoir, was a gift to the Corporation by Mrs. O'Shaughnessy in 1928. It is used as a rest house and convalescent home for nurses from the various city hospitals, and has accommodation for eight inmates apart from staff. It is under the administration of the Medical Superintendent of Dudley Road Hospital.

During the year 1938 there were 323 nurses admitted.

Difficulties of water supply and drainage, associated with the relatively small use made of the institution by nurses, caused the Committee to decide early in 1939 on its closure.

VOLUNTARY HOSPITALS

The accommodation available in the voluntary hospitals in the city was extended at the very end of the year by the opening of the Hospital Centre (later named the Queen Elizabeth Hospital by Her Majesty the Queen) on December 31st. At the time of writing a total of 200 beds have been opened. Of these, 64 beds are rented by the Public Health Committee temporarily in relief of the accommodation at Selly Oak Hospital.

HOSPITAL CO-ORDINATION

The Birmingham Hospitals Council continues to take an active and most helpful part in the co-ordination of the hospital services of the city: through its Voluntary Hospitals Committee, in the mutual discussion and co-ordination as between the voluntary hospitals of the problems of bed accommodation, etc., with which they are faced, and through its Co-ordination Committee in the balancing of the respective problems of the voluntary and of the public hospitals. During the early months of 1938

the Hospitals Council applied itself most effectively, at the request of the representatives of the voluntary hospitals, to the difficult task of assessing the hospital bed requirements in relation to the opening of the new Hospitals Centre (Queen Elizabeth Hospital) and the allied question of the continuance of the two existing great voluntary general hospitals. Various aspects of these questions were still under review at the end of the year.

Soon after the end of the year arrangements were brought into being for co-ordinating admissions to the voluntary and to city hospitals, and for the establishment also of a Hospital Bureau for the registration of empty beds, for the facilitation of admission of acute cases. These points will receive more detailed reference in the next report.

INSTITUTIONAL MEDICAL SERVICES (Local Government Act, 1929)

No alteration has taken place during the year in the allocation of institutional medical services to the Public Health Committee, Public Assistance Committee, Mental Deficiency Acts Committee, etc.

POOR LAW MEDICAL OUT RELIEF

The policy indicated in previous reports whereby the Public Assistance Committee make temporary appointments in respect of vacancies occurring in the medical staff of the Out Relief Department has been continued during the year pending general review of the position in due course.

A feature of the year has been growing co-ordination in the use of beds for the chronic sick, though with still an undesirable overcrowding from time to time.

(a) Number of medical relief districts.....	19
(b) Number of districts included in (a) in which the "open choice" system of medical relief has been introduced.....	—
(c) Number of district medical officers.....	19
(d) Number of officers included in (c) whose whole time is devoted to public health service.....	4

INSTITUTIONAL PROVISION FOR THE CARE OF MENTAL DEFECTIVES

There has not been any extension during 1938 of the institutional provision for the care of mental defectives.

REPORT ON MATERNITY AND CHILD WELFARE

By DR. ETHEL CASSIE,
Senior Assistant Medical Officer of Health for Maternity and Child Welfare

CHIEF STATISTICS, 1938

Birth-rate, 16·6 per 1,000 (17,425 live births).

Illegitimate Birth-rate, 4·0 per cent (697 illegitimate births).

Infant Mortality Rate, 61 per 1,000 live births (1,068 deaths).

Stillbirths, 35 per 1,000 live and stillbirths (627 stillbirths).

Neo-natal Mortality, 26·7 per 1,000 births (466 deaths). (Infant deaths in the first four weeks of life.)

Deaths from one to two years, 7·3 per 1,000 of the age population (116 deaths).

Deaths from two to five years, 2·2 per 1,000 of the age population (99 deaths).

Maternal Mortality in Childbirth, 2·71 per 1,000 live and stillbirths (49 deaths).

Child Population under five (estimated), 73,423.

GENERAL COMMENTS

Births

There has again been a general rise in the birth-rate, affecting the Central Wards and the Middle and Outer Rings of Wards. The illegitimate birth-rate has also, unfortunately, shown a further rise.

Infant and Child Mortality

The *infant mortality* has risen one point, from sixty in 1937 to sixty-one per 1,000 births in 1938.

A decrease of sixty deaths occurred during the "neo-natal" period under the age of one month. There was an increase of fifty-two deaths between one and twelve months of age, as compared with the figures for 1937, due to the prevalence of whooping cough and enteritis.

The *neo-natal death-rate* (26·7 per 1,000 live births) is much lower than it was in 1937, when it was 31·0, and lower than the five years' average of 1933 to 1937 (31·5). The number of deaths from prematurity is the lowest recorded.

The number of *stillbirths* is equivalent to thirty-five per 1,000 of the live and stillbirths. The total loss of life from stillbirths and neo-natal deaths amounts to 1,093, while the deaths of infants between the age of one month and twelve months total 602.

The stillbirth rate, neo-natal deaths and maternal mortality in childbirth have closely associated factors. In all three there has been a definite reduction.

The *death-rate among illegitimate infants* is lower than in the previous year.

A marked decrease has occurred in the *death-rate of children from one to two years*. The rate from *two to five years* has also fallen considerably.

Maternal Mortality in Childbirth

In Birmingham the maternal mortality for the year shows a decrease as compared with 1937 (2·71 per 1,000 total births against 2·96), while the rate for England and Wales, as a whole, shows a reduction (2·97 against 3·11).

Puerperal Sepsis and Puerperal Pyrexia

Each case notified has been investigated in detail and any necessary action taken.

Births

During 1938 there were 17,425 live births (8,905 males and 8,520 females) belonging to Birmingham, and 627 stillbirths, making a total of 18,052. The live births number 447 more than in the previous year, and were equal to a birth-rate of 16·6, against one of 16·3 in 1937. The birth-rates of the past thirty-eight years are given in Table I in the Appendix. It will be seen that except for fluctuations during the war period there was a steady decline in the rate from 31·4 in 1901 to 14·7 in 1933, but in the last five years small increases were recorded.

The Birmingham birth-rate is among the higher rates in the list for the great towns, as will be seen from the figures below :

BIRTH-RATES IN LARGEST TOWNS

	<i>Per 1,000.</i>		<i>Per 1,000</i>
London	13·4	Leeds.....	15·4
Glasgow	19·5	Edinburgh	16·1
<i>Birmingham</i>	16·6	Bristol	14·6
Liverpool	18·7	Hull	18·1
Manchester	14·7	Bradford	13·5
Sheffield	15·7		

The birth-rate varied greatly in different parts of the city, as shown in the following table :

BIRTH-RATES IN WARDS

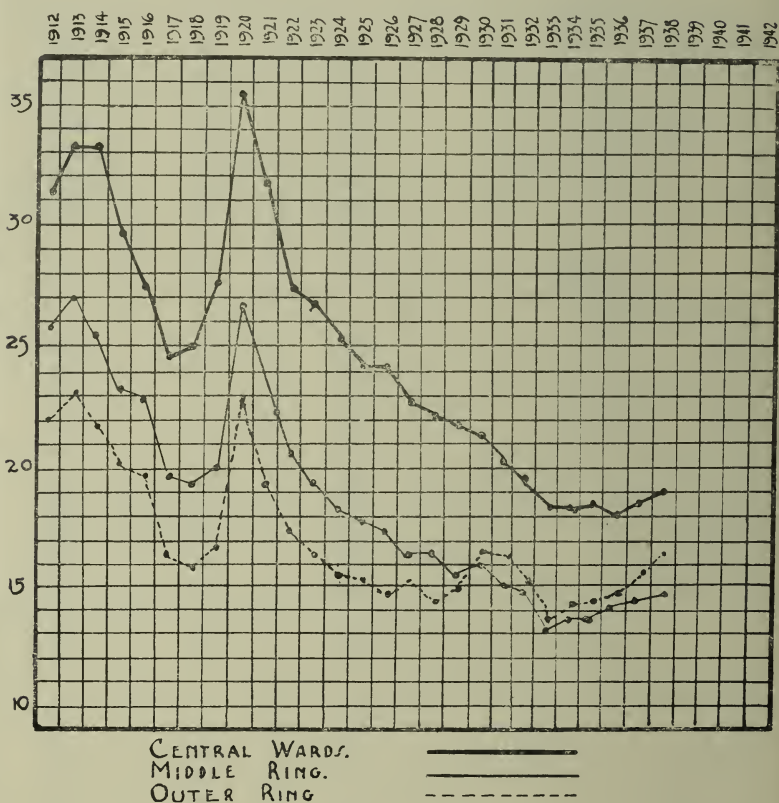
<i>Central Wards.</i>	<i>Middle Ring.</i>	<i>Outer Ring.</i>
St. Paul's..... 19·3	Lozells 17·3	Soho..... 12·9
St. Mary's 19·0	Aston 16·8	Sandwell 13·6
Duddeston and	Washwood Heath 12·9	Handsworth 14·4
Nechells 19·6	Saltley 13·5	Perry Barr 23·8
St. Bartholomew's 17·2	Small Heath 14·9	Erdington 14·0
St. Martin's and	Sparkbrook 17·4	Gravelly Hill 13·4
Deritend 19·2	Balsall Heath .. 16·9	Bromford..... 16·7
Market Hall 17·6	Edgbaston 8·9	Stechford..... 25·1
Ladywood 20·4	Rotton Park 15·3	Yardley 15·6
	All Saints 13·0	Acock's Green .. 14·7
		Hall Green 15·8
		Sparkhill 13·8
		Moseley and King's
		Heath 13·5
		Selly Oak 15·7
		King's Norton .. 15·0
		Northfield 17·4
		Harborne..... 13·5
1938..Average 19·0	1938..Average 14·7	1938..Average 16·4
1937..Average 18·3	1937..Average 14·4	1937..Average 15·3
1936..Average 18·0	1936..Average 14·2	1936..Average 14·8

BIRTHS AND STILLBIRTHS IN WARDS, 1938

	<i>Living Births.</i>	<i>Still- births.</i>	<i>Percentage of Stillbirths to Total Births.</i>
CITY	17,232	596	3·34
<i>Ward.</i>			
CENTRAL WARDS:			
St. Paul's	527	13	2·41
St. Mary's	470	19	3·89
Duddeston and Nechells	663	24	3·49
St. Bartholomew's	496	12	2·36
St. Martin's and Deritend.....	595	17	2·78
Market Hall.....	308	10	3·14
Ladywood	529	16	2·94
TOTALS	3,588	111	3·00
MIDDLE RING:			
Lozells	460	16	3·36
Aston	529	13	2·40
Washwood Heath	418	12	2·79
Saltley	373	6	1·58
Small Heath	409	17	3·99
Sparkbrook	494	16	3·14
Balsall Heath	512	15	2·85
Edgbaston	232	10	4·13
Rotton Park	449	16	3·44
All Saints.....	369	13	3·40
TOTALS	4,245	134	3·06
OUTER RING:			
Soho	301	6	1·95
Sandwell	271	10	3·56
Handsworth	380	18	4·52
Perry Barr	1,517	59	3·74
Erdington	389	13	3·23
Gravelly Hill	411	12	2·84
Bromford	466	13	2·71
Stechford	874	11	3·43
Yardley	482	20	3·98
Acock's Green	499	24	4·58
Hall Green	659	33	4·77
Sparkhill	438	15	3·31
Moseley and King's Heath.....	524	21	3·85
Selly Oak	498	22	4·23
King's Norton.....	502	14	2·71
Northfield	774	27	3·37
Harborne	414	11	2·59
TOTALS	9,399	349	3·58

The movements in the birth-rate in the three groups of wards are indicated in the diagram below :

BIRTH RATE IN GROUPS OF WARDS



NUMBER OF BIRTHS OCCURRING IN THE CITY EACH MONTH OF 1938
(excluding confinements in Birmingham of residents from outside areas)

Month.	Number of Live Births.	Number of Still- births.	Total Births.	Number of confinements in which	
				Twins were born.	Triplets were born.
January	1,352	58	1,410	20	—
February	1,369	55	1,424	12	—
March	1,528	44	1,572	16	1
April	1,482	49	1,531	24	—
May	1,627	67	1,694	21	—
June	1,456	53	1,509	21	—
July.....	1,457	54	1,511	22	—
August	1,314	38	1,352	16	—
September	1,445	37	1,482	15	1
October	1,428	47	1,475	12	—
November	1,333	54	1,387	16	—
December	1,441	40	1,481	14	3
TOTALS ..	17,232	596	17,828	209	5

The numbers quoted for live births and stillbirths include twins and triplets.

Illegitimate Births

During 1938 there were 697 illegitimate births belonging to Birmingham, and of this total 683 were born in Birmingham. The illegitimate births were in the proportion of 40·0 per 1,000 of the total live births, as against 37·0 for 1937.

The figures for the past twelve years were as follows :

	<i>Illegitimate Births per 1,000 live births.</i>		<i>Illegitimate Births per 1,000 live births.</i>
1927	36·5	1933.....	36·8
1928	33·6	1934.....	36·6
1929	36·6	1935.....	33·3
1930	35·8	1936.....	33·7
1931	33·8	1937.....	37·0
1932	32·9	1938.....	40·0

Infant and Child Mortality

The deaths of infants under one year of age numbered 1,068, and were equal to an infant mortality rate of sixty-one per 1,000 births.

The infant mortality rates for a number of years are shown in the table below :

INFANT MORTALITY RATE

	<i>Bir- mingham.</i>	<i>England and Wales.</i>		<i>Bir- mingham.</i>	<i>England and Wales.</i>
1901-05 ..	157	138	1921-25 ..	80	76
1906-10 ..	131	117	1926-30 ..	70	68
1911-15 ..	126	110	1931-35 ..	67	62
1916-20 ..	94	90			
1928.....	65	65	1934.....	68	59
1929.....	79	74	1935.....	64	57
1930.....	60	60	1936.....	62	59
1931.....	71	66	1937.....	60	58
1932.....	67	65	1938.....	61	53
1933.....	66	64			

The infant mortality rates in Birmingham and ten of the largest British towns for 1927, 1937 and 1938 are shown in the subjoined table :

	<i>Rate per 1,000 live births.</i>				<i>Rate per 1,000 live births.</i>		
	1927.	1937.	1938.		1927.	1937.	1938.
London	57	60	57	Leeds.....	77	67	64
Glasgow	107	104	87	Edinburgh ..	80	70	61
<i>Birmingham</i> .	72	60	61	Bristol	56	46	42
Liverpool	91	82	73	Hull	83	77	69
Manchester ..	82	76	69	Bradford	94	70	58
Sheffield	89	55	50				

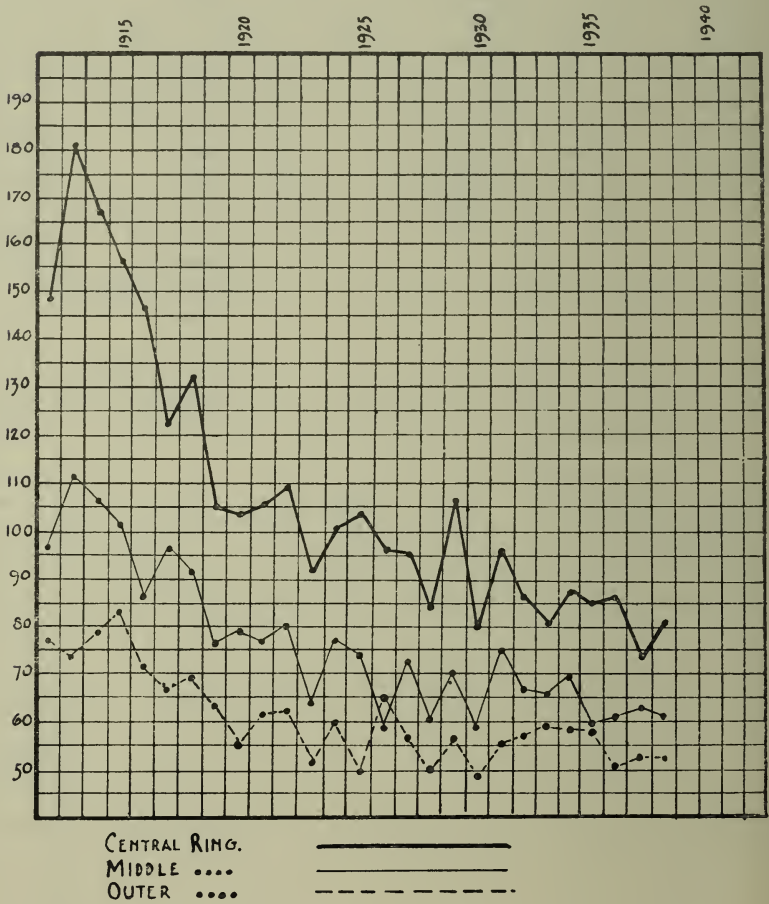
INFANT MORTALITY IN WARDS

The appended table shows the infant mortality rate in each of the wards of the city in 1938. The average mortality in the groups of wards ten years ago is given for comparison :

<i>Central Wards.</i>		<i>Middle Ring.</i>		<i>Outer Ring.</i>	
St. Paul's	80	Lozells	74	Soho.....	37
St. Mary's	77	Aston	64	Sandwell	51
Duddeston and		Washwood Heath	55	Handsworth	49
Nechells	80	Saltley	38	Perry Barr	57
St. Bartholomew's	64	Small Heath	51	Erdington	59
St. Martin's and		Sparkbrook	77	Gravelly Hill	36
Deritend	106	Balsall Heath....	58	Bromford.....	67
Market Hall	61	Edgbaston	38	Stechford.....	57
Ladywood	85	Rotton Park	82	Yardley	46
		All Saints	59	Accock's Green ..	50
				Hall Green	56
				Sparkhill	59
				Moseley and King's	
				Heath	54
				Selly Oak	65
				King's Norton ..	50
				Northfield	59
				Harborne.....	39
Average in 1938		Average in 1938	62	Average in 1938	54
Average in 1937		Average in 1937	64	Average in 1937	53
Average in 1928		Average in 1928	60	Average in 1928	50

The following diagram shows the fall in infantile mortality in each of the three groups of wards during the past twenty-seven years. It will be noted that the decrease has been much more marked in the central areas than in the other parts of the City, and that the range in the sectional rates last year was only from fifty-four to eighty-one, whereas in 1913 it was from seventy-four to 181. The approximation of the rates in the Middle and Outer Rings is, perhaps, associated with the fresh distribution of population arising from the re-housing operations of the City.

INFANT MORTALITY RATES



INFANT MORTALITY DURING THE YEAR 1938: DEATHS FROM
STATED CAUSES IN WEEKS AND MONTHS UNDER ONE YEAR OF AGE

Cause of Death.	Weeks.				Total Deaths under 1 month	Months.				Total Deaths under 1 year.
	0-	1-	2-	3-		1-	3-	6-	9-	
Measles	—	—	—	—	—	1	1	3	—	5
Scarlet fever	—	—	—	—	—	—	—	—	—	—
Whooping cough	—	—	—	—	—	12	12	22	6	52
Diphtheria and croup	—	—	—	—	—	1	2	1	—	4
Influenza	—	—	—	—	—	—	3	—	2	5
Tuberculous meningitis	—	—	—	—	—	—	—	1	1	2
Abdominal tuberculosis	—	—	—	—	—	—	—	1	—	1
Other tuberculous diseases ..	—	1	—	—	1	—	1	3	1	6
Rickets	—	—	—	—	—	—	3	3	1	7
Syphilis	—	—	—	—	—	3	—	—	—	3
Cerebro-spinal fever	—	—	—	—	—	—	4	4	—	8
Meningitis (not tuberculous)	—	1	—	—	1	—	2	—	1	4
Convulsions	4	—	—	1	5	1	1	—	—	7
Bronchitis	—	—	2	1	3	6	3	1	2	15
Pneumonia (all forms)	1	3	7	3	14	36	47	39	26	162
Gastritis	—	—	—	—	—	—	—	—	—	—
Diarrhoea, enteritis, etc.	—	1	1	1	3	56	92	37	24	212
Congenital malformations ..	39	15	7	4	65	22	11	3	1	102
Premature birth	211	20	11	3	245	20	1	—	—	266
Atrophy, debility & marasmus	5	—	—	—	5	3	—	—	—	8
Atelectasis	30	2	—	2	34	1	—	—	—	35
Injury at birth	64	—	1	1	66	—	—	—	—	66
Neglect (under 3 months) ..	—	—	—	—	—	—	—	—	—	—
Suffocation (Overlying)	1	—	—	—	1	2	1	—	—	4
Other causes	13	4	2	4	23	27	23	10	11	94
All causes	368	47	31	20	466	191	207	128	76	1068
Rate per 1,000 live births	21.0	2.7	1.8	1.1	26.6	10.9	11.8	7.3	4.3	61

There were actually sixty fewer deaths in the neo-natal period compared with the previous year (sixty-five fewer deaths from prematurity) but from the second to the twelfth months 112 more infants died. The table shows thirty-seven additional deaths from whooping cough and 133 from enteritis in this age group; but other causes of death showed a fall, reducing the final total.

INFANTS' DEATHS FROM "OTHER CAUSES"

(See preceding Table)

	1938.		1937.		1936.	
	<i>Under 1 month.</i>	<i>Total.</i>	<i>Under 1 month.</i>	<i>Total.</i>	<i>Under 1 month.</i>	<i>Total.</i>
Otitis media.....	1	19	—	36	—	32
Mastoiditis	—	10	1	18	1	22
Septic infections	6	18	3	14	1	19
New growths	—	—	—	1	—	1
Accidents	2	8	1	4	3	14
Congenital diseases	10	16	18	21	18	23
Other conditions	4	23	4	32	2	27
TOTALS	23	94	27	126	25	138

The next table shows the number of infant deaths from the more prominent causes of death during the last five years.

INFANT DEATHS FROM DIFFERENT CAUSES

	1938.	1937.	1936.	1935.	1934.
Measles	5	17	8	11	4
Whooping cough	52	15	66	26	52
Influenza	5	14	3	5	6
Tuberculosis	9	12	12	12	7
Convulsions	7	2	3	4	4
Bronchitis	15	16	14	9	16
Pneumonia	162	151	149	136	144
Diarrhoea and enteritis	212	81	82	115	127
Suffocation (overlying)	4	1	3	4	—
Congenital malformation.....	102	108	110	114	97
Premature birth	266	334	292	330	310
Injury at birth	66	58	61	56	61
Atrophy, debility and marasmus	8	15	20	18	20
Other causes	155	192	198	184	213
TOTAL	1,068	1,016	1,021	1,024	1,061

Infant Mortality and Illegitimacy

The following figures show the relative mortality among legitimate and illegitimate infants for the past year :

	<i>No. of Births.</i>	<i>Deaths under 1 year.</i>	<i>Infant mortality per 1,000.</i>
Legitimate	16,728	1,010	60
Illegitimate	697	58	80

The infant mortality rates during recent years were as follows :

	<i>Infant Mortality Rates per 1,000 Births.</i>			
	<i>Legitimate.</i>	<i>Average.</i>	<i>Illegitimate.</i>	<i>Average.</i>
1921	81	} 78	135	} 149
1922	82		178	
1923	69		151	
1924	81		142	
1925	76		139	
1926	70	} 68	150	} 128
1927	73		135	
1928	63		111	
1929	77		128	
1930	58		117	
1931	70	} 66	122	} 113
1932	65		125	
1933	64		119	
1934	66		106	
1935	63		91	
1936	61		105	
1937	59		91	
1938	60		80	

Neo-natal Mortality

During the last twenty-seven years there has been a decline in the mortality rate amongst children under four weeks of age, as will be seen from the table below. The figure for the year 1938 is a new low record.

	<i>Rate per 1,000 live births.</i>	
	<i>Birmingham.</i>	<i>England and Wales.</i>
1912-15 (average)	40·6	38
1916-20 "	36·3	37
1921-25 "	33·5	33
1926-30 "	31·0	33
1931-35 "	32·3	31
1931	32·2	32
1932	32·7	32
1933	30·8	32
1934	32·6	31
1935	33·4	30
1936	29·8	30
1937	31·0	30
1938	26·6	—

Stillbirths

The net number of stillbirths for the year was 627, equal to thirty-five per 1,000 of the live and stillbirths, which is the same rate as last year.

The following table shows the number of stillbirths over a period of years :

	<i>Stillbirths.</i>	<i>Percentage of Total Live Births.</i>
1912-15 (average)	710	3·2
1916-20 "	711	3·5
1921-25 "	649	3·3
1926-30 "	596	3·5
1931-35 "	604	3·7
1931	697	4·1
1932	603	3·6
1933	591	3·9
1934	580	3·7
1935	548	3·4
1936	590	3·6
1937	609	3·5
1938	627	3·6

Stillbirths and Neo-natal Deaths

There were 596 *stillbirths* during 1938, plus thirty-one further cases allotted to Birmingham by the Registrar-General, but not occurring within the city.

There were 457 cases of *neo-natal death*—i.e., death within the first four weeks of life. Considerably more than half of these deaths occurred within the first twenty-four hours, indicating again the close connection in the majority of cases between neo-natal death and the circumstances of the birth.

The age at death is shown in the following table :

24 hours or less	244
2-6 days old	112
7 days or more.....	101
TOTAL	457

On account of the close relation between stillbirths and the majority of neo-natal deaths, the two conditions are considered together in the following table :

	<i>Still- births (596).</i>	<i>Neo-natal deaths (457).</i>
<i>Place of Birth :</i>		
At home	296	256
Hospital or Institution	300	201
No information	—	—
<i>Gestation :</i>		
Premature.....	127	271
Full-term	437	185
No information	32	1
<i>Cause of Death :</i>		
Ante-natal causes	250	83
Intra-natal causes	224	74
Fœtal abnormalities	93	64
Prematurity with no other apparent cause.....	25	160
No information	4	1
Post-natal conditions	—	75
Number of cases in which mother attended ante-natal clinic at Welfare Centre	248=42%	199=44%

The causes of death listed under the various headings have been classified in the same way as in previous years.

The figure on the last line of the table relating to the percentage of mothers attending the ante-natal clinics should be compared with the percentage of the total known maternity cases who visited the ante-natal clinics. This number is 66 per cent.

Deaths of Children between 1 and 5 years old

These are set out in the table below, distinguishing those under two years from those over two :

	1 to 2 years old.				2 to 5 years old.			
	1938.	1937.	1936.	1935.	1938.	1937.	1936.	1935.
Measles	3	31	14	22	—	18	12	13
Whooping cough	17	6	20	14	6	4	19	24
Diphtheria	3	9	1	3	15	19	22	19
Scarlet fever	—	2	1	—	1	1	1	5
Influenza	2	5	3	2	1	3	—	1
Tuberculosis	14	10	9	8	9	20	12	16
Nervous diseases	7	21	15	13	7	12	9	12
Bronchitis and pneumonia .	40	52	37	38	18	25	24	20
Diarrhoea and enteritis ..	7	6	6	8	3	2	1	5
Other digestive diseases ..	3	2	6	4	9	10	10	10
Accidental deaths	6	11	3	3	15	20	16	13
All other causes	14	16	16	18	15	23	19	30
TOTALS	116	171	131	133	99	157	145	168

The following table shows the deaths and death-rates among children between one and five years compared with the average figures for previous years :

	1-2 years : Average.		2-5 years : Average.	
	Deaths.	Death-rate per 1,000.	Deaths.	Death-rate per 1,000.
1912-15	821	45.9	697	12.2
1916-20	579	32.2	568	9.9
1921-25	451	23.7	323	5.8
1926-30	309	19.3	233	4.9
1931-35	194	12.9	181	3.8
1936	131	8.8	145	3.3
1937	171	11.2	157	3.7
1938	116	7.3	99	2.2

The figures for 1938 in respect of these two groups of young children have reached a new low level, which is in contrast with the rise in the infant mortality rate.

Maternal Mortality in Childbirth

The deaths of women classed to pregnancy and child-bearing in Birmingham during 1938 numbered forty-nine. The number of live births was 17,425, giving a maternal mortality rate per 1,000 births of 2·81.

The maternal mortality in previous years is shown in the table below :

	<i>Deaths from.</i>		<i>Rate per 1,000 Live Births (total).</i>	
	<i>Puerperal Fever.</i>	<i>Other Puerperal Causes.</i>	<i>Birmingham.</i>	<i>England and Wales.</i>
1911....	36	48	3·82	3·87
1912....	27	45	3·25	3·98
1913....	44	48	3·86	3·96
1914....	33	41	3·19	4·17
1915....	35	38	3·44	4·18
1916....	31	40	3·44	4·12
1917....	26	20	2·60	3·89
1918....	29	22	3·03	3·79
1919....	23	28	2·64	4·37
1920....	51	39	3·59	4·33
1921....	26	37	2·84	3·92
1922....	25	35	3·02	3·81
1923....	34	33	3·51	3·82
1924....	37	35	3·91	3·90
1925....	35	39	4·15	4·08
1926....	41	33	4·13	4·12
1927....	25	37	3·59	4·11
1928....	32	34	3·83	4·42
1929....	26	41	3·99	4·33
1930....	27	32	3·39	4·40
1931....	28	37	3·81	4·11
1932....	28	34	3·73	4·21
1933....	25	31	3·72	4·51
1934....	29	31	3·83	4·60
1935....	23	33	3·52	4·10
1936....	25	35	3·67	3·81
1937....	13	39	3·07	3·23
1938....	11	38	2·81	3·08

The rates calculated on live and stillbirths for 1938 were :

Birmingham	2·71
England and Wales	2·97

The causes of death as given on the death certificates may be classified as follows :

Puerperal sepsis (after confinement or abortion)	11
Puerperal hæmorrhage	7
Albuminuria and convulsions	5
Other toxæmias of pregnancy	8
Accidents of pregnancy (abortion, ectopic gestation, etc.).....	3
Embolism	2
Other causes	13

COMPARATIVE MATERNAL MORTALITY IN ELEVEN LARGEST TOWNS

	<i>Deaths per 1,000 Live Births from</i>		
	<i>Puerperal Sepsis.</i>	<i>Other Puerperal Causes.</i>	<i>Total.</i>
London	0·79	1·12	1·91
Glasgow	2·28	2·82	5·10
<i>Birmingham</i>	0·63	2·18	2·81
Liverpool	0·68	1·36	2·04
Manchester	1·45	2·99	4·44
Sheffield	1·60	1·35	2·95
Leeds	0·26	1·58	1·84
Edinburgh	2·25	3·04	5·29
Bristol	0·66	2·64	3·30
Hull	0·35	2·42	2·77
Bradford	0·51	3·85	4·36

Maternal Mortality Enquiry

At the request of the Ministry of Health a medical enquiry has been made in the case of every maternal death in childbirth during each year since 1929. The information so obtained, direct from doctors, midwives and hospitals, makes it possible to classify the deaths more accurately than from the consideration of the death certificates only.

The maternal deaths in 1938 have been tabulated as follows :

A.—Deaths due to pregnancy and childbirth.....	52
B.—Deaths due to associated conditions	21
TOTAL	73

A.—DEATHS DUE TO PREGNANCY AND CHILDBIRTH

(1) NOT ASSOCIATED WITH A NOTIFIABLE BIRTH.		
(a) <i>Abortion</i> :		
Septic	4	}
Non-septic	1	
	<hr/> 5	
Criminal	3	}
Apparently criminal	1	
Spontaneous.....	1	
	<hr/> 5	
	<hr/>	
(b) <i>Ectopic Gestation</i>		3
TOTAL		8
(2) ASSOCIATED WITH A NOTIFIABLE BIRTH.		
(a) <i>Sepsis</i> :		
Normal labour	3	}
Abnormal labour	8	
(b) <i>Toxæmia</i> :		
Eclamptic.....	4	}
Non-eclamptic	8	
(c) <i>Hæmorrhage</i> (non-toxæmic) :		
Ante-partum hæmorrhage	0	}
Post-partum hæmorrhage	7	
(d) <i>Obstetric Shock</i> :		
Normal labour	1	}
Abnormal labour	6	
(e) <i>Accidents of Labour</i> :		
Rupture of uterus	4	}
Inversion of uterus	2	
(f) <i>Embolism</i>		1
TOTAL		44

B.—DEATHS DUE TO ASSOCIATED CAUSES

Pneumonia	7
Heart disease	6
Heart disease and pneumonia	1
Tuberculosis.....	1
Syphilis.....	1
Laryngeal diphtheria	1
Encephalitis	1
Rupture of cerebral aneurysm	1
Appendix abscess	1
Peritonitis	1
TOTAL	21

Estimation of Avoidable Factors

A review of the circumstances of every case of maternal death makes it possible to estimate whether or not there was any avoidable factor, and in this respect the cases have been classified according to the following table. Two or more factors may have been present in any one case.

Abortions and ectopic gestations are not included in this table, but cases of death due to associated conditions are included.

TABLE I

	<i>Sepsis.</i> (11)	<i>Toxæmia.</i> (12)	<i>Hæmorrhage</i> (7)	<i>Other Obstetric Causes.</i> (14)	<i>Associated Conditions</i> (21)
Lack or inadequacy of A.N. care	3	10	0	4	6
Lack or inadequacy of obstetric facilities	6	0	2	3	0
Lack or inadequacy of specialist or hospital treatment ..	5	5	1	2	4
Lack of co-operation of patient or her friends	4	7	1	3	7
Safety only by avoidance of pregnancy..	0	0	0	0	1
No avoidable factor..	3	1	4	8	11

Total number of cases in which one or more <i>avoidable factors</i> were present	38 = (58.5%)
Total number of cases in which death apparently inevitable . . .	27
Total number of cases in which safety could only have been attained by avoiding pregnancy	1
TOTAL	66

A table showing various conditions which may influence maternal mortality is given on page 52, Table II.

Comparison with Previous Years

A comparison of the figures in the principal groups with those of previous years is shown hereunder :

TABLE III

	<i>Due to Pregnancy and Child-birth.</i>						<i>Due to Associated Conditions.</i>
	<i>Abortion.</i>	<i>Sepsis.</i>	<i>Toxæmia.</i>	<i>Hæmorrhage.</i>	<i>Other Causes.</i>	<i>Total.</i>	
1931....	9	21	7	11	11	59	21
1932....	9	26	8	9	15	67	9
1933....	14	15	9	4	19	61	7
1934....	14	18	6	7	11	56	19
1935....	7	20	12	6	10	55	14
1936....	9	17	10	10	15	61	17
1937....	8	6	16	7	13	50	20
1938....	8	11	12	7	14	52	21

Two of the deaths from sepsis were of particular interest. In one the surgeon had sore throat and hæmolytic streptococci were obtained. In the other case the midwife had three septic cases in her practice, and hæmolytic streptococci were obtained from her throat ; she was not wearing a mask.

TABLE II.—THIS TABLE SHOWS THE VARIOUS CONDITIONS WHICH MAY INFLUENCE MATERNAL MORTALITY.

	A.—Due to Pregnancy and Childbirth.					B.—Due to Associated Conditions.
	Abortion.	Sepsis.	Toxæmia.	Hæmorrhage.	Other Causes including Ectopics.	Total.
Number of cases	5	11	12	7	17	52
<i>Parity :</i>						
Primipara	2	6	8	3	9	28
Multip., 5 or less	3	4	2	3	6	18
Multip., 6 or more	—	1	2	1	2	6
<i>Age Groups :</i>						
Under 20	—	—	—	—	1	1
20-30	4	3	3	2	6	18
31-40	1	8	8	5	9	31
41 and over	—	—	1	—	1	2
<i>Home Conditions :</i>						
Well-to-do	—	—	—	—	—	—
Comfortable	4	8	4	5	10	31
Poor	1	3	8	2	7	21
Destitute	—	—	—	—	—	—
<i>Legitimacy :</i>						
Legitimate	3	11	12	7	17	50
Illegitimate	2	—	—	—	—	2
<i>Ante-Natal Care :</i>						
Adequate	—	8	2	7	10	27
Inadequate	—	3	9	—	4	16
Nil	5	—	1	—	*3	9
<i>Attendance at Delivery :</i>						
Midwife	—	3	—	2	1	6
Doctor (booked)	—	3	2	1	3	9
Doctor (not booked)	2	—	—	—	3	5
Booked Hospital or Maternity Home	—	3	1	4	4	12
Emergency Hospital	3	2	6	—	6	17
No skilled attention	—	—	—	—	—	—
Undelivered	—	—	3	—	—	3

Puerperal Sepsis

The following table shows the number of cases of puerperal pyrexia during 1938 and the preceding four years.

The out-of-city cases are those not normally resident in Birmingham, but coming into the city for confinement.

	1934.	1935.	1936.	1937.	1938.
Total puerperal pyrexia	329	276	264	315	408
Out-of-city cases	16	16	20	37	56
Birmingham cases	313	260	244	278	352

Detailed information is obtained in nearly all the Birmingham cases, and is shown in the following tables :

	1934.	1935.	1936.	1937.	1938.
Number of cases investigated.....	313	259	244	278	352
Primipara	126	125	102	132	165
Multipara	166	103	106	108	147
Parity not stated	21	31	36	38	40
Abortion	43	40	28	34	22
Transferred to hospital for treatment..	157	134	130	126	120
*Already in hospital	—	—	—	—	106
*District Nurse	—	—	—	—	80
*Midwife or relatives	—	—	—	—	8
*Not known	—	—	—	—	38
Consultant called in (P.H. Dept. Scheme)	25	15	18	26	18
Deaths { (a) Childbirth	11	17	15	8	8
(b) Abortion	9	4	4	3	1

*Figures kept from March 1st, 1938.

It will be noted that in the special maternal mortality enquiry, eleven deaths are ascribed to sepsis. Only eight of these deaths were notified as puerperal pyrexia. Of the three remaining deaths classed as sepsis, one was due to peritonitis following cæsarean section, one to general septicæmia with cerebral embolism, and one to septicæmia following the delivery of a macerated fœtus.

Of the four abortions dying from sepsis only one was notified as puerperal pyrexia.

The *ante-natal care* in the 352 Birmingham cases of puerperal pyrexia in 1938 was as follows:

Sufficient ante-natal care	236
Insufficient	54
Not stated	62
TOTAL	352

In the 352 Birmingham cases of puerperal pyrexia the following complications of labour were noted (frequently more than one complication per case):

	1937.	1938.
Perineal and/or vaginal stitches	66	103
Instrumental delivery	56	64
Internal version	2	4
Breech delivery	6	17
Cæsarean section	17	21
Abortion	34	22
Post-partum hæmorrhage	21	49
Ante-partum hæmorrhage	3	6
Manual removal of placenta	18	15
Retained products	15	20
Induction	—	18
Ovarian thrombosis	—	4
Placenta prævia	2	—
TOTALS	240	343

No complication of labour was noted in 126 of the 352 cases.

Out of the 352 Birmingham cases the suggested causes of pyrexia, apart from perineal or uterine sepsis, are as follows:

Respiratory conditions	39
Mastitis	36
Eclampsia fits	1
Tuberculosis	4
Anæmia	5
Pyelitis	23
Salpingitis	1
Phlebitis	6
*Other conditions	16
Not known	64
TOTAL	195

*See table on next page.

*“ Other Conditions ” consist of :

Epileptic fits	1
Appendix abscess	1
Polypus removed	1
Infection from doctor's throat	1
Acute epistaxis	1
Varicose ulcers.....	1
Rheumatism	1
Red degeneration in fibroids	1
Pain in the lumbar region over left kidney	2
Ulcerative colitis	1
Cystitis	3
Constipation.....	1
Insanity	1
TOTAL	16

Ophthalmia Neonatorum

1,105 cases of discharging eyes were notified to this Department during 1938. The great majority of these were not cases of ophthalmia neonatorum due to gonococci, but were reactions following prophylactic treatment, or mild catarrhs. Fifty-one cases were admitted to the Eye Hospital, as against forty-four in 1937.

In one case in which the condition was submitted for hospital treatment at too late a stage there was severe ulceration followed by complete blindness in one eye, and very defective sight in the other.

Pemphigus Neonatorum

Twenty-two cases of pemphigus neonatorum were reported during 1938. Five were removed to hospital and seventeen attended by district nurses.

MATERNITY AND CHILD WELFARE SERVICE

Health Visitors' Training Course

The sixteenth course of training for the Health Visitors' Certificate was held from September 5th, 1938, to March 25th, 1939.

One hundred and thirty-three application forms were received, sixty-two candidates were interviewed, and sixteen applicants were accepted for the assisted course. In addition to these sixteen students there were thirteen other entries. Of these, three nurses were sent by the East Sussex County Council and one by the Grimsby Public Health Department, the remainder entering as independent candidates.

Twenty-nine students sat for the Health Visitors' Certificate examination of the Royal Sanitary Institute at the end of the course. Twenty-three, or 79 per cent, were successful.

The general arrangement of the course has followed the usual lines. Additional lectures included one by Miss G. M. Truscott, Warden of the Birmingham Settlement; one by Mr. Hague, Chief School Attendance Officer, on the work of a School Attendance Officer; and one by Mr. Gittins on "Overcrowding and Measures for Abating Overcrowding," and Miss Parker a talk on the "Care of the Unmarried Mother."

In addition to the usual visits of observation, the students visited a School Clinic and a Rural Maternity and Child Welfare Centre at Chipping Campden, where Dr. C. Morris Jones (Gloucestershire C.C.) gave a most instructive talk on rural work. The Voluntary Committee at Campden and Stratford-on-Avon were also most helpful in showing their child welfare centres.

An audiometer demonstration was given to the students by the School Medical Department, and visits were paid to Employment Exchanges, both juvenile and adult, the Bacteriological Laboratory, University Settlement and the Mental Deficiency Department.

The Committee grant of £10 has enabled the purchase of a few up-to-date text-books which have been loaned to the students.

Throughout the course there has been an extremely happy and co-operative spirit amongst the students.

Maternity and Child Welfare Staff

<i>Medical Officers :</i>	WHOLE-TIME	.	.	.	14
	PART-TIME	.	.	.	32
<i>Dentists :</i>	WHOLE-TIME	.	.	.	1
	PART-TIME	.	.	.	1
<i>Number of Health Visitors</i>	.	.	.	.	105
<i>(Attached to Child Welfare Centres, 96 ; Special Visitors, mainly visiting non-notifiable infectious disease, 9)</i>					
<i>Superintendent of Health Visitors</i>	.	.	.	.	1
<i>Assistant Superintendents of Health Visitors</i>	.	.	.	.	2
<i>Supervisors of Midwives</i>	.	.	.	.	3
<i>Tutor for Training Course</i>	.	.	.	.	1
<i>Special Workers</i>	.	.	.	.	3
<i>(Foster Mother Scheme, Unmarried Mothers, Home Helps)</i>					
<i>Dental Nurses</i>	.	.	.	.	2
<i>Immunisation Nurses</i>	.	.	.	.	2
<i>Remedial Gymnasts</i>	.	.	.	.	2
<i>Class Mistresses :</i>	<i>Cookery</i>	.	.	.	5
	<i>Sewing</i>	.	.	.	15
<i>City Midwives</i>	.	.	.	.	97

Health Visiting in the Home

The Health Visitors undertake home visiting for children under the age of five, ante-natal home visiting, and also the visiting required for non-notifiable infectious disease, and ophthalmia neonatorum. In order to cope with the outbreaks of infection in different localities nine visitors are employed for specialised work in the latter connection, the general health visitors dealing with sporadic cases in their localities.

The Health Visitors carry out the Centre work in addition to home visiting.

Total visits to children under five years.....	308,220
Total visits to expectant mothers	20,086
Other visits	22,122
All visits	350,428

Home visiting forms a very important part of the work of the health visitors, aiming, as it does, at teaching the mothers the care of the child in relation to the immediate environment.

Visits are paid monthly up to the age of twelve months, subsequently visits are paid quarterly up to the fifth year.

A total of 308,220 home visits were paid during 1938.

During 1938 there has been an increase of 3,160 children in the visited population. The following table shows the visited population for each maternity and child welfare centre during the last four years, and the number of children who attended during 1938. It will be seen that the central areas have lost part of their child population, while the child population in the outlying areas has materially increased. The diminution in the central areas is not, however, so considerable as might have been anticipated. The largest differences are in the areas served by the centres in Floodgate Street, Lancaster Street, Hope Street, and Monument Road. Rather unexpectedly there is also some diminution of child population in the Acock's Green area.

MATERNITY AND CHILD WELFARE CENTRES ARRANGED IN ORDER
OF PRESENT VISITED POPULATION UNDER FIVE YEARS, SHOWING
CHANGES IN AREAS FROM 1935 TO 1938, AND NUMBER AND
PERCENTAGE ATTENDING CENTRE

<i>Change in last four years : + Increase - Decrease</i>	<i>Centre.</i>	1935.	1936.	1937.	1938.	<i>Atten- ded Centre during 1938.</i>	<i>% Attend- ing Centre.</i>
	Carnegie Institute ..	3,364	3,478	3,360	3,357	2,367	70
- -	Monument Road	3,827	3,482	3,272	3,292	1,968	60
+	Hay Mills	2,398	2,420	2,594	3,282	1,948	59
	Wright Street.....	3,280	3,224	3,167	3,211	2,208	69
-	Kingstanding	3,258	3,103	2,916	2,863	1,841	64
- -	Hope Street	3,174	2,894	2,952	2,793	1,509	54
-	Bloomsbury Street ..	3,078	2,775	2,797	2,738	1,552	57
+	Glebe Farm	1,125	1,332	1,944	2,702	987	37
-	Sutton Street	2,905	3,040	2,652	2,691	1,838	68
-	Acock's Green	2,771	2,677	2,653	2,585	2,395	92
	Greet	2,501	2,409	2,467	2,510	1,408	56
+	Stirchley	1,937	2,217	2,405	2,481	1,546	62
+	Northfield	1,921	2,332	2,316	2,463	1,373	56
- -	Lancaster Street	2,944	2,779	2,478	2,349	1,345	57
+	Yardley Wood	1,791	1,866	1,921	2,334	1,584	68
+	Walsall Road	785	1,313	1,784	2,322	1,335	57
+	Kettlehouse	1,060	1,127	1,867	2,229	1,478	66
	Stratford Road	2,193	2,202	2,161	2,186	1,275	58
	Lansdowne Street	2,153	2,187	2,186	2,167	1,205	56
	Trinity Road	2,009	2,008	1,919	1,996	1,470	74
+	Erdington	1,791	1,866	2,010	1,932	1,575	82
+	Bromford	1,502	1,539	1,598	1,755	1,012	58
+	Handsworth	1,565	1,571	1,540	1,752	996	57
+	Weoley Castle	1,672	1,641	1,807	1,749	1,084	62
+	Stechford	1,557	1,581	1,606	1,663	1,219	73
+	Washwood Heath ..	1,554	1,661	1,609	1,639	982	60
-	Irving Street	1,681	1,615	1,306	1,457	865	59
+	Selly Oak	1,087	1,283	1,323	1,355	893	66
- -	Floodgate Street	1,751	1,606	1,361	1,241	680	55
	King's Heath	1,116	1,135	1,257	1,161	873	75
+	Tennal Road	—	—	772	948	573	60
{	Harborne	835	1,002	538	495	454	92
	TOTALS	64,585	65,365	66,538	69,698	43,838	63

+ + or - - denotes marked increase or decrease.

The increase in the children seen at home or at Child Welfare Centres in 1938, as compared with 1937, is shown in the following table, together with an age analysis of the children dealt with in 1938. It will be seen that the percentage who attend the Child Welfare Centres in the first year of life is 75 per cent, while in the fifth year the percentage has fallen to 40 per cent. The percentage of children visited, however, while naturally higher in the first year, does not fall off so markedly in the later years.

INCREASE IN CHILDREN VISITED DURING 1938

	1938.	1937.	<i>Increase.</i>
Number of individual children visited ..	69,698	66,538	3,160
Number of individual children attended Centres	43,838	36,307	7,531
Percentage attending Centres of children visited	63%	54%	9%

CHILDREN DEALT WITH IN 1938

<i>Age.</i>	<i>Year.</i>	<i>Number of Births.</i>	<i>Total Visited.</i>	<i>% Visited.</i>	<i>Number Attended Centre during 1938.</i>	<i>% Attended Centre during 1938.</i>
Under 12 months .	1938	17,425	16,012	91·9	12,026	75
1-2 years	1937	16,978	14,544	85·7	11,326	78
2-3 years	1936	16,386	13,704	83·6	7,329	53
3-4 years	1935	15,911	13,009	81·8	5,578	43
4-5 years	1934	15,681	12,429	79·3	4,949	40
	1933	15,054			2,623	—
			Attained five years during 1938.			

Breast Feeding—Health Visitors' Enquiry during Home Visitation

The Health Visitors made a special enquiry in regard to all the children born in the city from January to June, 1937, and still alive in January, 1938, in order to ascertain to what extent breast feeding had been carried out.

The tables given on the following pages have been compiled as a result of this enquiry. Some of the figures obtained are of considerable interest. It will be noted that at the health visitors' first visit no less than 13 per cent of the infants are already artificially fed, that is within three weeks of birth. Between the ages of three and six months 49 per cent of the infants are artificially fed. The reasons given for abandoning breast feeding are also of some interest. It will be seen that no less than 34 per cent were said to be due to anxiety on the part of the mother as to the progress of the child. This emphasises the importance of the psychological factor.

There was no great preponderance of dried milk feeding as compared with liquid milk in the diet of the infants, to that the facilities given for obtaining dried milk at the Child Welfare Centres do not play a great part in the abandonment of breast feeding.

The division of the area into Inner and Outer Circles does not give any very wide distinction, except in relation to the number of children artificially fed because the mother was going to work. It will be seen that in the Inner Circle no less than 21 per cent give this reason, while in the Outer Circle only 10 per cent do so.

A further enquiry was made as to the number of cases in which the child was placed on artificial feeding while under the care of the midwife, that is, with her concurrence or on her advice. These figures show that approximately 6 per cent of the infants born in institutions were weaned from the breast while in the institution, and that 1 per cent were weaned while under the care of the midwife on district, giving an average of 2·4 per cent for all live births, yet on the Health Visitors' first visit no less than 13 per cent had been weaned, so that the mothers are responsible for weaning infants to the extent of nearly 10 per cent within the first three weeks after the child's birth. The percentage weaned in institutions is not unduly high in view of the abnormalities and emergencies admitted.

TABLE I—BREAST-FEEDING RECORD OF CHILDREN BORN JANUARY TO JUNE, 1937 (*Children living January, 1938*)

<i>Total number of cases reported by Health Visitors.</i>	<i>Inner Circle (12 centres) 2,023</i>	<i>Outer Circle (21 centres) 2,355</i>	<i>Total 4,378</i>	<i>Total % of all babies of corresponding age</i>
<i>Breast fed for :</i>				
1 month or less { wholly	1,543	1,855	3,398	
partly	206	225	431	
			3,829	87%
1-2 months { wholly	1,162	1,355	2,517	
partly	262	372	634	
			3,151	72%
2-3 months { wholly	914	1,094	2,008	
partly	295	304	599	
			2,607	60%
3-6 months { wholly	751	881	1,632	
partly	283	336	619	
			2,251	51%

Children not breast fed at first visit—549, or 13% of total.

	<i>Inner Circle (12 centres)</i>	<i>Outer Circle (21 centres)</i>	<i>Total.</i>
<i>Cause of abandoning breast feeding :</i>			
(1) Illness of mother.....	262=24%	264=23%	526=23%
(2) Anxiety of mother (re progress of child)	303=28%	430=37%	733=33%
(3) Mother going to work....	224=21%	113=10%	337=15%
(4) Other causes	299=27%	348=30%	647=29%
TOTALS	1,088	1,155	2,243
<i>Artificially fed :</i>			
<i>Kind of food :</i>			
(1) Liquid milk	519	465	984
(2) Dried milk	574	704	1,278
(3) Other foods	116	167	283

TABLE II—ARTIFICIAL FEEDING WHILE UNDER THE CARE OF THE MIDWIFE

Births in Institutions	5,010
Number artificially fed	291=5·8%
Births on district	11,968
Number artificially fed	115=0·96%
Total live births.....	16,978
Number artificially fed	406=2·39%

Child Welfare Centres

A.—Number of centres provided and maintained by the City Council	31
B.—Number of centres provided and maintained by a Voluntary Association.....	1
C.—Total number of attendances at ordinary consultations at all centres during the year :	
(1) By children under one year of age.....	170,242
(2) By children between the ages of one and five years....	92,449
D.—Total number of children who attended ordinary consultations for the <i>first time</i> during the year :	
(1) Children under one year of age.....	13,806
(i.e., 79 per cent of births)	
(2) Children between the ages of one and five years.....	3,292
E.—Total number of children who were in attendance at the centres throughout the year :	
(1) Children under one year of age	12,026
(2) Children between the age of one and five years.....	31,812
Percentage of children between one and five years (total in city approximately 60,000) attending Child Welfare Centres (E) (2).....	53
Number of fresh children attending special medical inspection clinics for children two to five years (with 28,654 attendances)	8,821

GROWTH OF WORK AS SHEWN BY
ATTENDANCES AT CHILD WELFARE CENTRES DURING 1921 AND 1938

	1921.	1938.
<i>Number of Centres</i>	21	32
<i>Infants and Children :</i>		
Births reported	19,360	17,528
Primary visits	18,718	16,880
Re-visits (infants and children)	169,482	291,340
Total visits and re-visits	188,200	308,220
<i>Mothers :</i>		
Primary visits	3,291	5,426
Re-visits	6,425	14,660
Total visits and re-visits	9,716	20,086
<i>Children's Consultations :</i>		
Number held	2,610	3,986
Fresh children attending	14,988	17,098
Total attendances	130,321	234,037
Number seen by doctor	58,910	92,686
<i>Special Medical Inspections (1½-5 years) :</i>		
Number held	—	1,674
Total attendances	—	28,654
<i>Mothers' Consultations</i>		
<i>Ante-natal :</i>		
Number held	824	2,889
Fresh mothers attending	4,683	11,968
Total attendances	10,380	53,801
<i>Post Natal :</i>		
Number held (October—December only)	—	192
Number of individual mothers attending	—	565
Total attendances of mothers	—	593
Total number of infants attending	—	3,257
<i>Attendance at :</i>		
Sewing classes	9,335	16,693
Cookery classes	1,645	2,181
Health talks	20,685	79,011

INDIVIDUAL CHILDREN ATTENDING CENTRES IN 1938

Acock's Green	2,395	Lansdowne Street.....	1,205
Billesley	1,584	Monument Road	1,968
Bloomsbury Street	1,552	Northfield	1,373
Bromford	1,012	Plowden Road (Glebe Farm) ..	987
Carnegie Institute.....	2,367	Selly Oak	893
Erdington	1,575	Stechford	1,219
Floodgate Street	680	Stirchley	1,546
Greet	1,408	Stratford Road	1,275
Handsworth	996	Sutton Street.....	1,838
Harborne	454	Tennal Road	573
Hay Mills	1,948	Trinity Road.....	1,470
Hope Street	1,509	Walsall Road.....	1,335
Irving Street	865	Washwood Heath.....	982
Kettlehouse	1,478	Weoley Castle	1,084
King's Heath.....	873	Wright Street	2,208
Kingstanding	1,841		
Lancaster Street	1,345	TOTAL	43,838
Under 1 year		12,026	Over 1 year..... 31,812

MATERNITY AND CHILD WELFARE CENTRES, 1938

CENTRES.	INFANTS AND CHILDREN				CHILDREN'S CONSULTATIONS.						SPECIAL MEDICAL INSPECTIONS (1½ to 5 years).				MOTHERS' CONSULTATIONS (Ante-Natal).					*POST-NATAL CLINICS. 13 Clinics were held at each of 16 Centres.					
	Births Reported.	Primary Visits.	Re-visits.	Total Visits.	Mothers (Ante-natal Visits).	Number Held.	Fresh Children Attending.	Total Attendances.	Average per Consultation.	Number seen by Doctor.	Number Held.	Total Attendances.	Average per Consultation.	Number Held.	Fresh Mothers Attending.	Total Attendances.	Average per Consultation.	Number of Mothers Examined.	Average per Consultation.	Number of Infants Attending.	Average per Consultation.	Number of Infants seen by Doctor.	Average per Consultation.		
ACOCK'S GREEN	569	555	14,244	14,847	1,019	146	710	9,955	68	3,460	96	1,984	20	96	384	1,972	21	38	3	414	32	190	15		
BEECHES ROAD	545	522	7,746	8,303	590	143	583	6,839	48	3,204	46	774	17	67	295	1,330	20	29	—	—	—	190	15		
BLOOMSBURY STREET	659	655	14,259	15,041	1,044	147	648	7,774	53	3,642	50	773	15	145	582	2,839	20	29	—	—	—	239	18		
BROMFORD	455	414	8,158	8,603	501	98	307	5,501	56	2,241	49	1,042	21	68	234	1,288	19	34	2	266	20	239	18		
CARNEGIE INSTITUTE	884	877	12,500	13,570	1,155	242	1,034	14,344	59	5,732	50	842	17	148	644	2,892	20	41	3	219	17	173	13		
ERDINGTON	552	541	7,687	8,269	582	147	627	11,317	77	3,422	50	995	20	133	394	2,243	17	—	—	—	—	—	—		
FLOODGATE STREET	292	295	5,982	6,341	477	67	246	3,101	46	1,696	33	397	12	60	195	914	15	—	—	—	—	—	—		
GLEBE FARM	540	524	8,840	9,421	452	94	466	4,886	51	2,339	48	948	19	85	332	1,662	20	—	—	—	—	—	—		
GREET	655	646	12,334	13,028	1,024	98	583	6,841	69	2,613	48	965	20	97	393	1,704	18	—	—	—	—	—	—		
HANDSWORTH	543	527	7,626	8,218	431	98	408	6,190	63	2,393	49	811	17	82	246	1,422	17	22	—	—	—	—	—		
HARBORNE	160	167	2,999	3,176	209	94	181	3,209	34	1,294	54	1,097	20	97	477	1,915	20	16	—	—	—	—	—		
HAY MILLS	835	801	11,768	12,687	740	148	887	10,804	73	3,557	54	1,097	20	54	101	376	16	—	—	—	—	—	—		
HOPE STREET	799	752	11,047	11,907	881	145	679	8,163	56	3,162	50	848	17	118	533	2,195	18	39	3	241	19	166	13		
IRVING STREET	412	381	5,794	6,237	413	96	366	5,519	57	2,376	49	631	13	49	143	735	15	—	—	—	—	—	—		
KETTLEHOUSE	473	445	7,636	8,119	725	98	608	6,450	66	2,593	48	941	12	101	465	2,266	22	—	—	—	—	—	—		
KING'S HEATH	458	439	5,199	5,647	454	97	374	5,259	54	2,079	48	590	12	70	217	1,110	16	—	—	—	—	—	—		
KINGSTANDING	584	579	12,296	12,918	860	145	628	8,630	60	3,390	82	1,225	15	105	453	2,188	22	35	3	230	18	151	12		
LANCASTER STREET	589	574	11,569	12,236	804	148	554	8,732	59	3,232	49	805	16	105	384	2,097	20	21	2	198	15	196	15		
LANDOWNE STREET	510	507	9,611	10,152	725	195	383	6,953	71	2,422	50	737	18	96	326	1,983	21	56	4	341	26	256	20		
MONUMENT ROAD	863	849	15,342	16,373	619	195	811	11,074	57	4,239	50	737	15	146	364	2,733	19	66	5	174	13	146	11		
NORTHFIELD	511	473	7,962	8,452	502	126	544	6,863	54	3,208	48	755	16	99	321	1,737	18	20	2	246	19	172	13		
SEELY OAK	354	357	4,728	5,099	267	98	336	5,803	59	2,347	48	750	17	49	192	1,090	22	—	—	—	—	—	—		
STEECHFORD	694	553	9,067	9,652	514	146	501	7,921	54	3,307	49	954	19	70	254	1,225	18	18	—	—	—	—	—		
STURCLEY	694	553	9,061	9,652	514	97	428	5,485	57	2,304	48	954	20	71	263	1,232	17	16	1	292	22	214	16		
STRATFORD ROAD	638	623	11,026	11,713	687	98	582	6,257	64	2,181	48	725	15	94	409	1,746	19	—	—	—	—	—	—		
SUTTON STREET	639	622	11,103	11,818	734	193	720	9,539	49	3,307	49	954	20	70	263	1,232	17	16	—	—	—	—	—		
TENNAL ROAD	253	241	4,561	4,815	320	52	329	2,334	43	1,139	45	678	15	98	617	2,033	21	—	—	—	—	—	—		
TRINITY ROAD	540	516	6,354	6,930	525	147	502	8,223	56	3,191	50	878	18	107	433	1,854	17	54	4	161	12	159	12		
WASHWOOD HEATH	427	408	5,954	6,393	281	97	387	5,568	57	2,004	48	930	19	92	316	1,674	18	20	2	255	20	165	13		
WOLLEY CASTLE	339	327	6,688	7,040	480	96	283	5,148	54	2,372	48	806	17	145	53	218	19	26	2	171	13	175	13		
WRIGHT STREET	837	808	15,307	16,249	1,116	148	890	8,955	61	4,002	98	1,743	18	145	53	218	19	23	2	196	15	196	15		
YARLEY WOOD	507	503	8,862	9,465	559	144	503	8,500	59	3,392	97	1,419	14	48	282	1,143	24	—	—	—	—	—	—		
TOTALS	17,528	16,880	291,340	310,143	20,086	3,986	17,098	234,037	58	92,686	1,674	28,654	17	2,841	11,579	53,801	19	540	3	4,006	19	2,891	3	540	14

*—A Special Post-Natal Clinic commenced in October at 16 Centres. 987 attendances were recorded during the first three-quarters of the year for advice on post-natal matters, and a further 123 during the fourth quarter at Centres where no post-natal clinic was held. It is important to note that these women were advised only and not examined.

The various clinics at the child welfare centres have been well attended and the educational work has reached a high standard. A table is given showing the increase in the centre work during the last seventeen years. The increase in attendances at the clinics is remarkable, particularly in relation to the work for expectant mothers. The work for "toddlers" has been greatly extended, and is shown particularly in the special medical inspections. The increase in the educational work is notable. The actual number of births recorded is 1,832 less than in 1921, which was a "peak" year, following the war.

During 1938 the number of children on the health visitors' list increased by 3,160. Post-natal clinics were commenced during October at sixteen centres.

Medical Inspection of Children from 2 to 5 years

Special sessions are devoted to the medical examination of children from two to five years at Child Welfare Centres. The number of such sessions during the year was 1,674, and the total attendances were 28,654, giving an average attendance of seventeen.

The total number of children attending during the year was 11,978, an increase of 230 over the previous year. Children are asked to return every quarter for examination, and it is hoped eventually to cover almost all the children in this age group. It must be understood that children of this age group also attend the ordinary children's consultations at the Child Welfare Centres and are regularly visited at home.

The "defects" noted at the special medical inspections have been classified as shown in the table. Of the 11,978 children examined, 8,942 were suffering from one or more "defects"—i.e., 75 per cent, a high proportion, which emphasises the need for such special examinations. No less than 13 per cent of the children examined suffered from acute illness during the year.

In considering individual groups some allowance must be made for the individual medical officer's point of view in relation to the conditions found. For instance, when a heart murmur is found, certain medical officers may classify it as congenital, others as rheumatic, and others regard it as secondary to anæmia. In relation to rickety deformities, certain medical officers are interested in these, and note them more particularly than others. It may be taken, however, that no gross defect is omitted from the record, though minor defects may not have been noted in a proportion of the children. This divergence of standard makes the observation of environmental factors of little value, so "unsuitable clothing" and "lack of rest" only are included in the table. It is satisfactory that so few cases of the former are noted.

In practically all cases some treatment was obtained where required, but it was not always continued as long as appeared advisable.

TODDLERS' MEDICAL INSPECTION, 1938

Number of children who attended Medical Inspection Clinics during 1938	11,978
Total number of attendances	28,654
First time this year	8,821
Number of these <i>children</i> noted as suffering from one or more of the defects or diseases in the attached list. (N.B.— <i>Not</i> number of defects)	8,942
Number of children suffering from environmental conditions	5,832
Number of children noted as having had an acute illness during 1938—e.g., pneumonia, infectious diseases, etc.	1,661
<i>Eyes</i> (defect or disease) :	
Squint	387
Inflammatory conditions—e.g., conjunctivitis, corneal ulcer, blepharitis	223
Other eye conditions—e.g., cataract, blindness	80
<i>Skin</i> :	
Eczema	237
Purulent conditions—e.g., impetigo, septic spots, folliculitis, boils	218
<i>Ear, Nose and Throat</i> :	
Otorrhœa	382
Deafness	44
Enlarged or diseased tonsils and/or adenoids.....	3,411
Nasal obstruction and/or mouth breathing.....	528
<i>Teeth</i> :	
Carious or defective	3,171
<i>Glands</i> :	
Enlarged or palpable submaxillary or cervical glands.....	1,620
<i>Heart</i> :	
Congenital heart disease (when definitely diagnosed).....	96
Rheumatic heart disease (when definitely diagnosed).....	109
<i>Anæmia</i>	376
<i>Lungs</i> :	
Any abnormality, including bronchitis, bronchiectasis, fibrosis, unresolved pneumonia, rhonchi, rales, dullness, etc., but not including cases of "cough" with no noted physical signs in lungs	445
<i>Rickets</i> :	
Active rickets (when definitely diagnosed as such).....	197
Rachitic deformities—e.g., bow legs, knock knee.....	1,638
<i>Other Deformities</i> :	
Flat foot, kyphosis, scoliosis, talipes, torticollis, dislocated hip, pigeon chest, any other deformity	958
<i>Mentality</i> :	
Backwardness from any cause	126
<i>Speech</i> :	
Backward or defective	245
<i>Environmental Conditions</i> :	
Unsuitable clothing (or inadequate clothing)	1,012
<i>Rest</i> :	
Bed-time later than 7-0 p.m.	5,432
No day-time rest	7,551

Ante-natal Clinics at Child Welfare Centres

The average number of ante-natal clinics held weekly is fifty-six and the average attendance is nineteen per clinic; 66 per cent of the women seen by Health Visitors in 1938 attended these clinics. This is an increase of 2 per cent on the previous year. A special consultation clinic is held weekly at Lancaster Street Centre.

<i>Year.</i>	<i>No. of Sessions.</i>	<i>No. of fresh expectant mothers attending ante-natal clinics.</i>	<i>Total attendances.</i>	<i>Births and Still-births.</i>	<i>Births and Still-births visited.</i>	<i>Percentage of mothers visited attending ante-natal clinics.</i>
1916	No record	561	No record	21,347	8,143	7
1917	"	538	"	18,286	9,143	6
1918	"	1,603	3,275	17,430	12,044	13
1919	"	2,940	6,250	20,079	15,154	19
1920	857	3,939	8,812	25,980	21,006	19
1921	824	4,683	10,380	22,938	18,718	25
1922	800	4,095	8,450	20,510	16,254	25
1923	890	4,386	9,391	19,698	16,193	27
1924	981	4,043	10,395	18,934	15,969	25
1925	1,034	4,346	11,135	18,445	15,647	28
1926	1,117	4,630	12,043	18,517	15,626	30
1927	1,188	4,615	12,252	17,773	16,217	28
1928	1,304	6,098	15,803	17,817	16,186	38
1929	1,522	7,308	19,751	17,393	16,522	44
1930	2,071	9,466	28,323	18,105	17,828	53
1931	2,090	8,616	27,608	17,740	16,937	51
1932	1,892	8,174	25,983	17,219	16,190	50
1933	1,905	8,290	26,538	15,645	14,975	55
1934	1,953	8,867	28,719	16,261	15,161	58
1935	2,203	9,200	32,871	16,459	15,500	60
1936	2,368	9,771	37,556	16,976	15,806	62
1937	2,510	10,798	43,504	17,587	16,749	64
1938	2,841	11,579	53,801	18,052	17,493	66

Ante-natal clinics are also held at Dudley Road and Selly Oak Hospitals, at the Maternity Hospital, and at the City Maternity Homes at Heathfield Road and Wake Green Road. In 1938 the mothers attending there numbered 6,559. A number of these attended child welfare centres also.

Post-Natal Clinics

Attempts to secure medical supervision of women following child-birth through the ante-natal clinics have not proved very successful. A medical examination six to twelve weeks after delivery is required to ascertain if any disease or defect requires treatment. It had been noted at an experimental clinic that if the mother were asked to attend with her new-born infant, she would readily do so, and the doctor winning her confidence was able to arrange for the mother's own examination. It was decided to

Ultra-violet Light Clinics at Child Welfare Centres

<i>Condition.</i>	<i>Total No. of Cases.</i>	<i>No. of New Cases.</i>	<i>No. of Attendances</i>
(1) Rickets, prophylactic rickets and delayed dentition	4,394	1,429	20,111
(2) Catarrhal children	913	311	4,308
(3) General debility	2,663	899	12,459
(4) Nervous irritability	126	45	609
(5) Chronic chest conditions	986	335	4,112
(6) Asthma	91	28	402
(7) Muscular weakness	383	145	1,853
(8) Malnutrition.....	196	47	854
(9) Skin conditions	35	11	154
(10) Anorexia	141	39	627
(11) Enlarged glands	56	15	366
(12) Other conditions	568	197	2,649
TOTALS	10,552	3,501	48,504

These clinics were held at the following centres: Bloomsbury Street, Carnegie Institute, Floodgate Street, Greet, Harborne, Hope Street, Kingstanding, Lancaster Street, Monument Road, Sutton Street, Selly Oak, Stirchley, Stratford Road, Wright Street, Yardley Wood, Weoley Castle and Acock's Green. The last two centres had lamps installed only in 1938.

The total attendances show an increase of 4,518 compared with 1937, while 845 more children were treated.

<i>Year.</i>	<i>Total Number of Cases.</i>	<i>Number of Attendances.</i>
1936	8,224	37,616
1937	9,707	43,986
1938	10,552	48,504

Remedial Exercise Clinics for Toddlers

	<i>No. Attending.</i>	<i>No. of Remedial Clinics held.</i>	<i>Attendances.</i>
Monument Road	50	47	739
Hope Street.....	26	10	52
Carnegie Institute	77	47	663
Kingstanding	131	47	907
Stratford Road	82	44	628
Lancaster Street	93	46	902
Trinity Road	16	13	71
Billesley	22	23	222
Acock's Green	92	34	706
Wright Street	103	47	1,012
Selly Oak	114	45	1,000
Erdington	37	22	224
Northfield	55	23	223
Greet	48	16	269
Weoley Castle.....	21	4	29
TOTALS	967	468	7,647

During the past year extra clinics have been opened at the following centres: Hope Street, Trinity Road, Weoley Castle, Northfield, Erdington, Acock's Green, Yardley Wood and Greet.

The total attendances show an increase of 1,786 compared with 1937.

NUMBER OF ATTENDANCES

1936	6,450
1937	5,861
1938	7,647

<i>Type of Deformity.</i>	<i>Total Number of Cases of Defect.</i>	<i>Percentage of Total Cases of Defect.</i>
Genu valgum	625	31·5
Postural defects	371	18·7
Flat feet	325	16·4
Chest deformities	274	13·8
Hypotonicity	130	6·6
Large abdomen with consti- pation	98	4·9
Bowed tibiae	51	2·6
Kyphosis	48	2·4
Lordosis	48	2·4
Scoliosis	3	·15
Erb's paralysis	2	·1
Congenital talipes	2	·1
Torticollis	2	·1
Hemiplegia	2	·1
Infantile paralysis	1	·05
Diplegia	1	·05
Fracture	1	·05
	1,984	100

Post-natal Remedial Exercise Clinics for Women

These commenced during the past year at the following centres: Hope Street, Carnegie, Weoley Castle, Trinity Road and Greet, and should prove of great benefit to the mothers attending. The average attendance is low at present, but it is hoped to secure an improvement as the work becomes better known.

<i>Type of Defect.</i>	<i>Total Number of Cases of Defect.</i>	<i>Percentage of Total Cases of Defect.</i>
Lax abdominal muscles.....	60	54·6
Deficient perineum	27	24·6
Prolapse	12	11
Divarication of recti	9	8·4
Retroverted uterus	2	1·4
TOTALS	110	100·0

	<i>Number Attending.</i>	<i>Number of Clinics held.</i>	<i>Number of Attendances.</i>
Hope Street	23	20	68
Carnegie Institute	23	38	278
Weoley Castle.....	28	25	226
Trinity Road	12	29	79
Greet	23	17	87
TOTALS	109	129	738

Dental Treatment

	<i>Stratford Road.</i>	<i>Carnegie Institute.</i>	<i>Lancaster Street.</i>	<i>Selly Oak.</i>	<i>Total.</i>
Number of clinics held.....	242	306	158	52	758
Total attendances (mothers)	3,348	4,497	2,051	473	10,369
Total attendances (children)	1,308	1,556	904	482	4,250
Average attendance :					
Mothers	14	15	13	9	—
Children	5	5	6	9	—
Local anæsthetics	77	79	44	4	204
Gas	2,381	2,725	1,631	887	7,624
Dentures supplied	321	520	191	—	1,032
Total attendances of mothers and children....				14,619	
Number of inspection clinics held				32	
Number inspected.....				1,748	
Average per clinic (mother)				13	
Average per clinic (children)				6	

Treatment of Ear, Nose, Throat and Eye Conditions

Cases referred from Child Welfare Centres and examined during 1938 at the Children's Hospital for the treatment of the above conditions were as follows :

Eyes, ear and throat cases	390
Tonsils and adenoids (operation required)	703
Tonsils and adenoids (examination only)	337

The Provision of Food for necessitous Mothers and Children

Municipal Kitchen and Feeding Centres, 1938

The meals provided are uniformly appreciated. The usual two-course meal, consisting of meat, two vegetables and pudding, is served for both mothers and toddlers and the latter are given a glass of milk and some fruit in addition.

Dinner Centres

During the year the attendances at the thirteen dinner centres were 149,773 (46,878 mothers and 102,895 children).

ATTENDANCES

	<i>Number of Individual Mothers.</i>	<i>Number of Individual Toddlers.</i>	<i>Attendances.</i>
Bloomsbury Street	96	190	12,988
Carnegie Institute	88	164	13,228
Floodgate Street	61	78	9,064
Hope Street	72	202	9,527
Hatchett Street	50	76	8,775
Irving Street	70	129	9,822
Kingstanding	56	129	10,065
Lancaster Street	84	104	9,203
Lansdowne Street	68	130	12,757
Monument Road	103	204	17,725
Sutton Street	56	92	11,988
Weoley Castle	47	150	10,303
Wright Street	98	147	13,454
Handsworth (ten weeks)	10	21	874
TOTALS	959	1,816	149,773

COST

	£	s.	d.
Cost of food	2,016	7	2
Cost of transport	251	15	0
	£2,268	2	2
Receipts from Centres	295	9	9
	£1,972	12	5

Nett cost per meal, excluding wages and overhead charges.... =3·2d.
 Approximate total cost per meal =4·6d.
 Approximate total cost, including food, transport, gas, steam,
 rates of kitchen, rent of Hatchett Street, wages and
 renewals, after deducting receipts from Centres.....=£2,871 13s. 6d.
 The number of meals served has increased, and the cost per meal has fallen
 from 5d. to 4·6d. per meal.

Toddlers' "Breakfast" Meals

Number of individual children attending....	2,369
Total attendances made	204,729

At eighteen centres half a pint of milk and bread and butter were served to toddlers at 9·0 a.m. on five days during the week, and half a pint of milk was taken home to be given to the children later in the day.

Carnegie Infant Welfare Institute

This institution was presented to the Maternity and Child Welfare Committee by the Carnegie Trustees in 1923 to serve as a model child welfare centre and observation ward.

The child welfare centre occupies the ground floor, a dental clinic and X-ray department are provided in the basement, and the observation ward (ten beds) is on the first floor with accommodation for resident staff.

During the year 1938 the routine work of the Carnegie Institute has proceeded as usual. The average attendance at the infant consultations is maintained at fifty-nine per clinic. There are five infant consultations each week.

The attendance at the ante-natal clinics has increased considerably. The municipal midwives now bring their booked cases in person to the centre, and are thus working in much closer collaboration with the doctor and health visitors than formerly.

The educational classes have been well attended, and there has been an increase in the number of mothers attending the test feeding clinics.

CONDITIONS FOUND ON INVESTIGATION

	<i>Deaths.</i>	<i>Improved</i>	<i>Well.</i>	<i>I.S.Q.</i>	<i>Total Cases.</i>
Diseases of					
Alimentary System.....	2	5	19	6	32
Blood & Circulatory System	—	4	1	3	8
Deficiency diseases.....	—	3	—	4	7
Nervous System	—	—	—	8	8
Genito-urinary System	—	4	11	3	18
Respiratory System	3	13	5	3	24
Tuberculosis.....	1	—	—	8	9
Whooping cough.....	—	—	—	1	1
Other conditions.....	3	10	68	2	83
TOTALS	9	39	104	38	190

Parents' Guidance Clinic (Lancaster Street Child Welfare Centre)

During the year 1938 forty-six sessions of the Parents' Guidance Clinic were held on Tuesdays from 2-0 to 4-0 p.m. The Medical Psychologist is assisted by a special Health Visitor.

The attendances during the year were satisfactory; 75·7 per cent of the appointments were kept. Non-attendances were mainly due to bad weather and illness of the mother or child. Fresh appointments were given in these cases, and with the exception of eight parents the second appointment was kept.

ATTENDANCES.

Boys	70
Girls	50
Mothers.....	14
Fathers	12
TOTAL	146

Children and mothers have been referred to the Clinic from the following sources:

- (a) Private Practitioners.
- (b) Child Guidance Clinic.
- (c) Child Welfare Centres.

Children were referred for the following reasons:

Temper tantrums	16
Night terrors	10
Fear	9
Enuresis	5
Jealousy	6
Nervousness	3
Negativeness	3
Mismanagement	3
Masturbation	3
Self-assertion	2
Backward speech	1
Thumb sucking	1
Anorexia nervosa	1
Stammering	1
Regression	1
TOTAL	65

Of these forty-three were boys and twenty-two were girls. Three mothers were referred during the year for the following reasons:

Neurasthenia	2
Fear	1

One child was admitted to a nursery school and two more are awaiting admission.

One mother suffering from neurasthenia benefited considerably from a stay at Marle Hall Convalescent Home, Llandudno; her child improved from a visit to Canwell Hall, Sutton Coldfield.

Two Danish students, one doctor and a group of voluntary workers, had the work of the Clinic explained to them.

Two hundred and twenty special home visits were paid during the year; the visiting is slow owing to the distance between the cases. One day weekly is given for visiting. Grouping of the visiting has been attempted, but this has not been very successful owing to an attempt to visit the children as soon as possible after they have been referred to the Clinic. This often necessitates rearranging the visiting to eliminate time wasted in transport. Four parents did not wish to attend the Clinic, but were willing to receive advice in their own homes. The advice given at home is much appreciated.

Home Helps Service

Demands for the services of home helps are steadily increasing. During 1938 they were supplied in 1,358 cases, an increase of 221 over the previous year.

HOME HELPS SERVICE.

Number of cases in 1938	1,358
Number of cases in 1937	1,137
Increase of cases over preceding year	221
Number of Home Helps employed	81

The work has been satisfactorily done by the Home Helps, who are a very obliging, loyal and hard-working body of workers.

They are now obliged to contribute towards Unemployment Benefit, and it was at first feared that attendance at their local Labour Exchange might interfere with or even wreck the Home Help Scheme. Owing, however, to the courteous co-operation of the Manager of the Birmingham Labour Exchange the service has not suffered in any way, and the Home Helps may benefit materially.

Canwell Hall Babies' Hospital, near Sutton Coldfield. 84 Beds

This institution admits chronic ailing children from infancy to five years, referred mainly from the Welfare Centres.

The Hall is a large private house which was adapted for its present purpose and opened as a babies' hospital in November, 1930. The children were transferred from the Lodge Road Hospital, the wards there having been used as a babies' hospital for some years previously.

On the ground floor are twenty-two cots for infants under nine months, arranged in three wards from which the babies can be moved easily into the open on fine days. On this floor also are twenty-eight beds in three wards for children from nine months to five years. Attached to one large ward is a verandah with adequate sleeping accommodation for the patients of that ward. On the first floor are three admission wards taking six toddlers in each. The children remain in these admission wards for three weeks and a group of six is admitted weekly. In addition there are two other wards for toddlers, giving a further sixteen beds. There are two small isolation wards for suspected cases.

There have been no material additions or alterations since the institution was opened. There is always a long waiting list, and the addition of further accommodation would be an advantage.

<i>Number of Admissions.</i>		<i>Number of Discharges.</i>	
0-1 years	140	Well.....	219
1-2 years	173	Improved	142
2-5 years	173	Satisfactory	57
	—	In statu quo	51
TOTAL	486		—
	—	TOTAL	469
			—

Number of children in the hospital at end of year	81
Number of deaths	17

Of the total number of discharges, thirty were removed by the parents against medical advice. Of these, two had not completed the initial quarantine period of three weeks.

The average duration of stay was $60\frac{1}{2}$ days.

The diagnosed cases were classified as follows :

<i>Disease.</i>	<i>0-1 year.</i>	<i>1-2 years</i>	<i>2-5 years</i>	<i>Total.</i>
Anæmia	6	12	8	26
Chest conditions	18	24	17	59
Chronic dyspepsias	16	4	3	23
Debility and malnutrition	38	64	90	192
Ear conditions	8	7	7	22
Gastro-enteritis	20	3	—	23
Mismanaged	2	—	7	9
Nervous conditions	3	2	7	12
Rickets	3	17	4	24
Tonsillar conditions	—	9	14	23
Urinary conditions	6	3	3	12
Tuberculosis	2	2	2	6
Other conditions	9	12	7	28
TOTALS	131	159	169	459

Of these cases forty-five were transferred to other institutions.

To the Children's Hospital	10 children.
To Dudley Road Hospital	3 „
To Little Bromwich Fever Hospital	24 „
To Lordswood Nursery.....	3 „
To Yardley Green Road Sanatorium	5 „
TOTAL	45

Seventeen children died, one having been admitted in a moribund state.

CAUSES OF DEATH

Bronchopneumonia and marasmus.....	2
Bronchopneumonia and prematurity	3
Bronchopneumonia and pyuria	1
Gastro-enteritis	3
Gastro-enteritis and bronchopneumonia	1
Gastro-enteritis and marasmus	5
Cerebral agenesis and pneumonia	1
Otitis media and pneumonia	1
TOTAL	17

CLASSIFICATION OF AGES AT DEATH

0-2 months.	2-6 months.	6-12 months.	1-5 years.
4	10	1	2

INCIDENCE OF INFECTIOUS DISEASE

Chicken-pox	1
Diphtheria	3
Dysentery (Sonne)	5
Dysentery (Flexner)	2
German Measles	1
Measles	1
Scarlet fever	4
Para-typhoid fever.....	1
Whooping cough.....	6
TOTAL	24

There was no definite outbreak of any infection, all occurring as isolated cases. One case with a positive diphtheria swab proved to be a carrier, but he infected no other patient.

Tuberculosis

Nine cases were found to have a positive Mantoux reaction. Of these, five were considered active and removed to Yardley Green Road Sanatorium. The other four were discharged improved to their homes.

Pype Hayes Hall Convalescent Home, Erdington. Mothers, 24 ; Babies, 20

This large private house has been adapted as a convalescent home for mothers with their infants, and has been in use since 1920. Expectant and nursing mothers are admitted.

A mother may bring her infant, but no infants over the age of six months can be accommodated. The period of rest is helpful and the institution also serves an educational purpose, teaching young mothers how to care for their infants. There are twenty-four beds for women and twenty cots for infants. The period of stay is normally a fortnight.

The number of patients admitted this year is the highest on record.

The mothers have been grateful and contented and, except for colds during the severe weather, no epidemic has occurred.

From March 24th to April 4th twenty-one lying-in patients were admitted from Loveday Street Maternity Hospital (owing to alterations

there). They were attended by Dr. Muriel Hartley and the nurses from the hospital.

Concerts and plays were given by friends during the winter months. .
 Gifts of books, magazines and perambulators have been received.

Total number of mothers admitted.....	481
Total number of babies admitted	406
Number of mothers without babies (expectant).....	55
Number of babies without mothers	20

Lordswood Resident Nursery, Harborne. 35 Beds

This institution admits children under the age of two years who are in need of care under the Public Assistance Committee regulations. The institution was a large private house which was adapted for its present purpose by the Public Assistance Committee and was handed over to the Maternity and Child Welfare Committee in 1930. There are in all three large wards with two small wards for admissions and a small isolation ward. The children are admitted, not for reasons of health, but for care and protection.

During 1938 135 children were admitted and 134 discharged.

There was an epidemic of whooping cough in May and June, in relation to which fifteen children were transferred to the City Fever Hospital.

Altogether forty-eight children have been transferred to hospital during the year.

	<i>Cases.</i>
To general hospitals	28
To fever hospitals	20
TOTAL	48

The reasons for transfer were as follows:

Whooping cough.....	15
Nasal diphtheria.....	4
Measles	1
Bronchitis or pneumonia	8
Enteritis	7
Wasting disease	3
Tuberculosis.....	3
Otitis media	2
Meningitis (not T.B.)	2
Tonsillitis	1
Vomiting	1
Lymphangitis	1
TOTAL	48

Of these forty-eight children, eleven died in hospital at the following ages:

<i>Under 3 months</i>	3 { 2 wasting disease. 1 enteritis.
<i>3-6 months</i>	2 { 1 enteritis. 1 meningitis.
<i>6-12 months</i>	5 { 2 pneumonia. 1 enteritis. 1 whooping cough. 1 vomiting.
<i>Over 1 year</i>	1 (T.B. meningitis).

It is interesting to note that thirteen of these forty-eight cases (including six of the eleven deaths) had to be transferred to hospital during the first three weeks after admission—i.e., from the “admission nurseries.”

As usual, children over one year did extremely well, only one child dying—i.e., a case of tubercular meningitis admitted from a tuberculous mother and found to have a positive Mantoux reaction on admission.

Nursing Staff

The following results were obtained in the examinations for the Nursery Nurses Certificates :

<i>Elementary</i>	9 sat and all passed
<i>Advanced</i>	18 sat and 17 passed

City Maternity Home, Wake Green Road, Moseley. 47 Beds

This institution admits maternity cases and premature infants. The maternity cases are mainly those who have no suitable accommodation in their own homes.

The large private house, “Sorrento,” was handed over to the Public Health Committee in 1928, having previously been used as a hospital for disabled soldiers. A maternity home was urgently required, and it was decided to adapt the building for twenty maternity beds. The home was opened for this purpose in 1929. The following year the stable block was converted into an ante-natal clinic with an ante-natal ward above (ten beds), while later a new block was built to accommodate premature infants. In this block there is a ten-bed ward for infants and six single rooms for their mothers, with staff accommodation above. This building was opened in 1931.

During 1938 the number of deliveries in the Home was 845. Of the 845 cases 786 were booked and fifty-nine were unbooked cases from the ante-natal ward.

There was no case of puerperal septicæmia, although seven cases of mild pyrexia were notified. There was only one case of breast abscess in the Home, but four were reported after discharge by the Health Visitors.

There were three maternal deaths, one due to pulmonary embolism and the other two to cardiac conditions.

The premature baby ward has been well used. There has been an increase in the number of infants admitted, though the number of mothers admitted with the infants has somewhat diminished.

Maternity Wards

Number of deliveries	845
Primiparæ	552
Multiparæ	293
Booked cases	786
Unbooked cases	59

MOTHERS

(a) COMPLICATIONS OF LABOUR.	
Forceps deliveries	68 = 8%
Perineal lacerations	320 = 38%
Post-partum hæmorrhage	32
Prolapsed cord	13
Breech presentation	45
Twin pregnancies	10
Placenta prævia	8
Accidental ante-partum hæmorrhage	4
Induction of labour	70
Face presentation	4
External version under anæsthetic	6
(b) COMPLICATIONS OF PUERPERIUM.	
(1) <i>Maternal mortality</i>	3
(a) Embolism from white legs (no pyrexia).	
(b) Malignant endocarditis complicated by concealed accidental hæmorrhage.	
(c) Myocarditis after early forceps delivery.	
Post-mortem examinations were made in each case by a pathologist.	
(2) <i>Maternal Morbidity</i> :	
(a) Puerperal septicæmia	—
(b) Puerperal pyrexia :	
Mastitis	1
Malignant endocarditis	1
Pyelitis	1
Mild sapræmia	2
Cause unknown	2
	7
(3) <i>Mastitis</i> occurring in the Home during 1938 :	
(a) Breast abscess	1
(b) Flushed breast	21
N.B.—After discharge from the Maternity Home some mastitis occurred :	
Breast abscess	4
Flushed breast	2

INFANTS

Number born alive	855
Stillborn	38 (9 unbooked)
Died during first ten days.....	17 (5 unbooked)
Born before 36 weeks	34=4·0%
<i>Stillbirths :</i>	
Booked cases.....	29=3·5%
Unbooked cases.....	9=15%
<i>Causes :</i>	
Cord prolapsed or round neck.....	12
Toxæmia.....	10
Malformation of child	7
Small placenta	1
Born before arrival (breech—born at home)....	1
Syphilis	1
Long labour	3
Breech with extended legs.....	1
Cause unknown.....	2
	38
<i>Died :</i>	
Booked cases	12=1·5%
Unbooked cases	5=8%
<i>Causes :</i>	
Prematurity	7
Toxæmia.....	4
Hæmorrhagic disease	1
Grave familial jaundice	1
Hæmorrhage into suprarenals	1
Malformation of child	2
Placenta prævia	1
	17
<i>Premature babies born in Home :</i>	
Stillborn	13
Born alive	21
Died	7=33% of those born alive.
	41

Ante-Natal Ward

Booked cases admitted	343
Cases admitted for observation only or in early labour....	70
Cases showing complications	273 = 32%
<i>Complications :</i>	
Toxæmia	86
For induction (post mature or slight disproportion)	67
Pyelitis	33
For prevention of abortion or premature labour	26
Ante-partum hæmorrhage (all varieties except toxæmic) ..	18
Heart disease	14
For external version under anæsthetic	6
Hydramnios	4
Vaginal discharge	5
Glycosuria	2
Hyperthyroidism	1
Chest conditions	2
Severe anæmia	2
Chorea	1
Excessive vomiting	3
Severe varicose veins	2
Renal stone	1
	273
<i>Unbooked Cases :</i>	
Number admitted	84
<i>Reasons for admission :</i>	
Toxæmia	42
Pyelitis	11
For induction	4
For observation	7
Heart disease	3
Ante-partum hæmorrhage	2
For prevention of prematurity	2
Acute hydramnios	2
Hæmolytic anæmia	2
Chest conditions	1
Excessive vomiting	3
Severe varicose veins	2
Renal stone	2
Retroverted gravid uterus	1
	84
<i>Result :</i>	
Sent home improved	25
Kept for delivery	59

Premature Baby Ward

Number of premature babies admitted	249
Number of weakly babies admitted	11
Number of mothers feeding infants admitted	55

WEAKLY BABIES

Number admitted	11
Discharged well	6
Died (4 cranial, 1 suprarenal hæmorrhage)	5

PREMATURE BABIES

A.—SURVIVAL RATE BY WEIGHT

<i>Weight.</i>	<i>No. of Cases.</i>	<i>No. of Deaths.</i>	<i>Percentage Saved.</i>
0-2 lbs.	7	5 (2 moribund)	29
2-3 lbs.	30	21 (12 moribund)	30
3-4 lbs.	92	19 (14 moribund)	79
4-5 lbs.	100	12 (5 moribund)	88
Over 5 lbs.	20	1 (0 moribund)	95
—	—	—	—
	249	58	77
	—	—	—

B.—SURVIVAL RATE BY MATURITY

<i>Maturity.</i>	<i>No. of Cases.</i>	<i>No. of Deaths.</i>	<i>Percentage Saved.</i>
Under 28 weeks	14	11 (10 moribund)	21
28-30 weeks	15	9 (3 moribund)	40
30-32 weeks	52	19 (12 moribund)	63
32-34 weeks	76	12 (7 moribund)	84
34-36 weeks	77	5 (0 moribund)	94
Over 36 weeks	15	2 (1 moribund)	87
	—	—	—
	249	58	—
	—	—	—

ANALYSIS FOR YEARS 1931-1938

Total number of admissions	1,426
Total number of deaths	526 = 37%
Total number of babies saved	63%
Number of babies under 4-lbs.	51%

The results in each year can be seen by the following tables:

A.—RESULTS BY WEIGHT

Weight.	Total No. Admitted.	Percentage saved each year..								Total per cent. saved.
		1931	1932	1933	1934	1935	1936	1937	1938	
0-2 lbs.	52	—	—	—	—	—	—	—	28	3.8
2-3 lbs.	215	8	28	22.5	9	25	36	35	30	26.5
3-4 lbs.	492	65	72	65.5	53	29	73	50	80	60.0
4-5 lbs.	491	90	89	76.5	72	52	83	87	88	77.5
Over 5 lbs.	176	100	100	96	91	94	95	95	95	94.0

City Maternity Home, Heathfield Road, Handsworth. 30 Beds

This institution admits maternity cases who have no suitable accommodation in their own homes. The house was an institution for unmarried mothers and was taken over by the Maternity and Child Welfare Committee in 1920. It was adapted for use as a maternity home with eighteen beds. The Home was required to serve the northern half of the city. The original accommodation was very unsatisfactory, and various additions have been required.

A new building was erected in the grounds to serve as an ante-natal clinic and isolation unit and to provide additional staff accommodation. The new building was opened in March, 1937.

A premature baby ward is about to be built in connection with this institution.

During 1938 the work done at the Home continued to increase steadily; in the year there were 576 deliveries compared with 518 in 1937 and 442 in 1936. The Home is now working to the limit of its capacity with the existing staff and accommodation. A great many patients, including those referred for ante-natal treatment, have to be refused.

There was no case of puerperal sepsis, and the one case of puerperal pyrexia occurred in a patient suffering from acute pyelitis of pregnancy when she was confined.

There were five maternal deaths, which gives a very high mortality rate. However, in four of these cases death occurred during pregnancy and was caused by an intercurrent condition and not primarily by the pregnancy.

Maternity Wards

Number of deliveries	576
Primiparæ	372 (65%)
Multiparæ	204 (35%)
Booked cases	536
Unbooked cases	40

MOTHERS

(a) COMPLICATIONS OF LABOUR.	
Forceps deliveries.....	20=3·5%
Perineal lacerations	271=47%
Episiotomy followed by normal delivery	3
Obstetric shock.....	1
Manual removal of placenta	2
Prolapsed cord	3
Breech presentations (extended legs)	4
Face presentations	3
Twin pregnancies	9
Placenta prævia	0
Accidental hæmorrhage	3
Eclampsia	2
(b) COMPLICATIONS OF PUERPERIUM (MATERNAL MORBIDITY).	
Puerperal pyrexia—pyelitis	1
Mastitis	—
(c) MATERNAL MORTALITY.	
(1) Inter-current conditions admitted to Ante-natal Wards :	
Mitral stenosis with acute cardiac failure (8 months pregnant)	1
Acute diphtheritic laryngitis (8 months pregnant)	1
Cerebral hæmorrhage from congenital aneurysm (7 months pregnant)	1
Septic endocarditis following influenza (7 months pregnant)	1
(2) Obstetric shock	1

INFANTS

Number born	585
Born prematurely (36 weeks and less).....	22=3·8%
Stillborn	13=2·2%
Deaths during first 14 days	10=1·7%
<i>Causes of Stillbirths :</i>	
(a) Ante-natal	4
(b) Fœtal abnormalities	5
(c) Intra-natal prolapsed cord	1
(d) Prematurity	3
<i>Causes of Neo-Natal Deaths :</i>	
(a) Ante-natal	—
(b) Intra-natal cerebral hæmorrhage	3
(c) Fœtal abnormalities	4
(d) Post-natal icterus gravis neonatorum	1
(e) Prematurity	2
<i>Feeding of Infants on Discharge :</i>	
Breast fed	334
Breast and bottle	181
Bottle fed	70

Ante-Natal Ward

Total admissions (including re-admissions)	306
Individual admissions	282
Booked cases	246
Unbooked cases	60

REASONS FOR ADMISSION TO ANTE-NATAL WARD

Toxæmia	90
Hyperpiesia	18
Pyelitis	14
Hyperemesis	14
Ante-partum hæmorrhage	16
Threatened miscarriage	9
Anæmia	13
Cardiac disease	14
Rest	17
Retroverted gravid uterus	2
Hyperthyroidism	1
Diabetes	2
Epilepsy	1
Hæmatemesis	1
Inductions (slight disproportion and post-maturity)	56
Observation and early labour	34
Post-influenzal	*1
Toxæmia : Whooping cough contact	*1
Rest : Measles contact	*1
Diphtheria contact	*1
TOTAL	306

*These patients were admitted to the Isolation Block and confined there.

Drug inductions	69
Surgical inductions : Toxæmia	18
Disproportion	11

<i>Clinics.</i>	<i>Number Held.</i>	<i>Total Attendances.</i>
Doctors	153	3,052
Midwives	51	738
Post-Natal	52	375 (64%)

The City Maternity Homes

Maternity Wards

MOTHERS

	<i>Wake Green Road Home.</i>	<i>Heathfield Road Home.</i>
Number of confinements	845	576
Booked cases	786	536
Unbooked cases	59	40
Primiparæ	552	372
Multiparæ	293	204
Puerperal sepsis	—	—
Puerperal pyrexia	7=0·8%	1=2·7%
Maternal deaths	3	5
Forceps deliveries	68=8%	20=3·5%

INFANTS

	<i>Wake Green Road Home.</i>	<i>Heathfield Road Home.</i>
Number of births	855	585
Stillbirths	38=4·4%	13=2·2%
Deaths in first fourteen days	17=2·0%	10=1·7%
Premature births (before 37th week)	34=4·0%	22=3·8%
Ophthalmia neonatorum	—	—

Ante-natal Ward

	<i>Wake Green Road Home.</i>	<i>Heathfield Road Home.</i>
Admissions	427	306
Booked cases	343	246
Unbooked cases	*84	†60

*Of these 59 were kept for confinement in the Home.

†Of these 37 were kept for confinement in the Home.

Clinics

ANTE-NATAL

	<i>Wake Green Road Home.</i>	<i>Heathfield Road Home.</i>
<i>Doctors' Clinics :</i>	(4 sessions weekly).	(3 sessions weekly).
Attendances	6,017	3,052
New patients	1,087	678
Consultation cases	119	126
<i>Midwives' Clinics :</i>	(1 session weekly).	(1 session weekly).
Attendances	828	738
TOTAL ATTENDANCES	8,051	4,594

POST-NATAL

	<i>Wake Green Road Home.</i>	<i>Heathfield Road Home.</i>
	(1 session fortnightly).	(1 session weekly.)
Total attendances	604	375
Attendance rate	55·5%	65%

Premature Babies' Ward

Admissions	260
Premature babies	249
Feeble, but full-term babies	11
Survival rate of premature babies	77%

<i>Maturity.</i>	<i>Number Admitted.</i>	<i>(Only noted since 1936.) Per cent saved each year.</i>			<i>Per cent of Total Saved.</i>
		1936.	1937.	1938.	
0-28 weeks	45	—	—	20	6·6
28-30 „	60	34	25	40	31·5
30-32 „	137	43	40	65	49
32-34 „	206	80	61	84	78
34-36 „	204	87·5	92	93	91
Over 36 „	83	92	90	86	90

Bourne House Hostel

This private house has been adapted as a Hostel for the unmarried mother and child, and has been in use since April 4th, 1938.

Expectant mothers are admitted and they are transferred either to hospital or one of the City Maternity Homes for confinement and return there afterwards with the baby. There are ten beds for mothers and six cots for babies.

The period of stay is variable. In some cases the mother and baby return home to the parents in a week or two. In other cases the mother remains until she is able to go to work and the baby stays until a suitable foster home or other accommodation can be provided.

It is most useful for the difficult and second cases which the other Homes will not accept.

Cases admitted ante-natally	29
Cases admitted after confinement	7
Babies admitted without their mother	2
TOTAL	38
<i>Confinement :</i>	
Went to Dudley Road Hospital.....	6
Went to the General Hospital	1
Went to Heathfield Road Maternity Home.....	17
Booked at Heathfield Road Maternity Home (babies not yet born)	3
Discharged before confinement (one transferred to Cleveland House ; one left to get married).....	2
TOTAL	29
<i>Report on Mothers :</i>	
Returned home	15
Went to relatives	1
Were found domestic posts	4
Were found lodgings	2
Married the putative father.....	1
Transferred to Cleveland House	1
Did not return from Dudley Road Hospital (one case the baby died ; one transferred to Hostel, Monument Road).....	2
Girls still in the Hostel	10
TOTAL	36
<i>Report on Babies :</i>	
Went to foster mothers	12
With their mothers	7
Taken for possible adoption	3
Transferred to Institutions	3
Still in the Hostel	6
TOTAL	31

<i>The mothers remained in the Hostel with their babies for various periods :</i>	
Remained four to six months after confinement	3
Remained three months after confinement.....	3
Remained two months after confinement	7
Remained one month after confinement	5
Remained less than one month (three returned home with their babies ; one was a temporary case).....	4
Left before confinement	4
Still in the Hostel	10
TOTAL	36

Care of the Unmarried Mother

During the year 572 unmarried mothers and seventy-eight married women with illegitimate children came under the care of the department. 469 were first cases of illegitimacy.

<i>Dealt with at</i>	<i>First Cases.</i>	<i>Multiple Cases.</i>	<i>Married Women.</i>
Hope Lodge	*45	1	—
The Hawthorns (Salvation Army Home).....	17	13	—
Woodville (Roman Catholic Home).....	†21	—	—
Cleveland House (V.D.)	9	—	—
The Hostel	19	—	—
Bourne House	27	9	—
Birmingham Infirmary	9	12	2
Homes out of city	13	2	1
Own home, except for confinement	241	44	52
Own home entirely	68	22	23
TOTALS	469	103	78

*Fourteen more cases were sent in but did not stay.

†Eighteen additional cases were "out of city" cases.

REPORT ON TOTAL 650 CASES AT END OF THE YEAR

96 mothers and babies still in the Homes	15%
42 babies have died	6%
43 babies have been adopted	7%
14 babies are in Homes (without the mother).....	2%
49 babies are with foster mothers	8%
46 girls have married the babies' fathers.....	7%
53 mothers and babies have left the city.....	8%
307 mothers at home with their babies.....	47%
650	

GIRLS UNDER AGE OF CONSENT

14 years old	2
15 years old	8
16 years old	3
TOTAL	13

MOTHERS OF ILLEGITIMATE CHILDREN

(under age of consent)

Year.	Aged 16 years.	Aged 15 years.	Aged 14 years.	Aged 13 years.	Total.
1930.....	10	3	1	—	14
1931.....	3	—	1	—	4
1932.....	4	5	—	—	9
1933.....	6	1	2	—	9
1934.....	5	5	1	—	11
1935.....	3	2	—	—	5
1936.....	8	5	—	1	14
1937.....	10	6	2	—	18
1938.....	3	8	2	—	13

The subsequent history of cases dealt with in previous years is given below :

Cases dealt with.	Total Illegitimate Births.	Further pregnancies in 1938.								
		2nd	3rd	4th	5th	6th	7th	8th	9th	10th
1938=650	697	—	—	—	—	—	—	—	—	—
1937=532	628	2	4	5	—	—	—	1	—	—
1936=400	553	15	3	2	3	—	—	—	—	—
1935=416	530	5	5	—	3	—	—	—	—	—
1934=428	574	6	—	1	1	—	—	—	—	—
1933=451	554	1	—	—	—	—	—	—	—	1
1932=318	546	1	—	—	—	—	—	—	—	—
1931=239	576	2	—	—	—	—	—	—	—	—
1930=222	623	—	—	—	—	—	—	—	—	—

It is found each year that about 2 per cent of the cases dealt with since 1930 have another baby.

There were twenty-three cases of venereal disease. All received systematic treatment.

Home visits paid <i>re</i> unmarried mothers.....	1,316
Homes inspected <i>re</i> suitable for lodgings with babies	90
Cases visited in hospitals	477
Office interviews, other than applications	1,276

Of the 650 cases dealt with during 1938, 113 were not Birmingham women.

Came from Ireland	22
Came from Scotland	2
Came from Wales	4
Came from districts near Birmingham.....	21
Came from other English towns or areas	64
TOTAL	113

Fifty-three of these women have left the city with their babies.

Infant Life Protection

The Supervision of Foster Children

The statistical data are given below and relate mainly to the children given care and protection in private homes.

On the whole, the standard of care has been most satisfactory, and it has not been necessary to approach the Courts in dealing with the few difficulties that have arisen.

The Committee scheme for the supply of suitable foster mothers has continued to be of great benefit, and the number of children dealt with has steadily increased, though up to the end of 1938 less than 50 per cent of the total fostered children were under the scheme. The scheme is now widely known and care has been taken to select suitable children, dealing only with Birmingham cases.

Useful co-operation has been secured with the Public Assistance Department.

Under the foster mother scheme a high standard of foster home has been maintained. Details are given below of those cases where it has been necessary to remove children from the original foster mother. This is done with the greatest reluctance since it is considered much more satisfactory to retain the child in one particular home where it forms part of the family group. The approximate average weekly cost to the city, per child, under the foster mother scheme was 5s. 8d.

The foster mother scheme ceases to operate when the child reaches the age of five. During 1938 seven children were in this position and the arrangements made for them are detailed below.

Children not under the foster mother scheme pass from supervision when they reach the age of nine. There were twenty-three such cases during 1938, and they all remain with their foster mothers.

Owing to the influx of people from the distressed areas and Ireland many applications have been received from married couples, both wishing to work, for foster mothers in the city or for information as to day nurseries. For the majority of such cases suitable accommodation with daily minding was recommended.

The Foster Mother Service

Applications for foster mothers	312
Foster mothers interviewed for advice and instruction..	704
Unnotified homes found in city and homes used for an emergency	110
Applications for foster children	302
Visits paid to ascertain suitability of homes offered....	412
New homes registered in city during 1938	365
Total registered homes	644
Special visits paid	757
Routine visits (special workers only)	478
(1) AT THE END OF 1938 FIGURES WERE AS FOLLOWS:	
Foster mothers on scheme	156
Total foster mothers	368
Foster children on scheme	172
Total foster children	396
(2) TOTAL FOSTER CHILDREN DEALT WITH DURING 1938:	
Scheme	266
Non-scheme	392
	} 658
<i>Illegitimate children:</i>	
Scheme	226 = 34%
Non-scheme	262 = 40%
<i>Legitimate children:</i>	
Scheme	40 = 6%
Non-scheme	130 = 20%
(3) FOSTER CHILDREN UNDER SCHEME WHO HAVE ATTAINED THE AGE OF FIVE YEARS:	
Remained with same foster mother—payment now direct	5
Returned c/o parent	2
TOTAL	7
FOSTER CHILDREN UNDER SCHEME REMOVED TO OTHER HOMES:	
Able to return to care of parent	49
Legally adopted	30
Admitted to hospital (long illness)	3
Mothers left city and removed child to another district	4
Children attaining age of five years and returned to care of parent	2
Children now five years of age remaining with same foster mother	5
New foster mother off scheme	6
ADMITTED TO PUBLIC ASSISTANCE INSTITUTION:	
History of mental deficiency. Other members of family chargeable to Public Assistance Committee.....	1
Children mentally defective	3
Mother left city and deserted child	1
Parents refused to make any payments for child's main- tenance or clothing (legitimate children of separated couples).....	3
	} 8
TOTAL	107

NEW CASES DEALT WITH ANNUALLY

	Scheme.					Outside Corporation Scheme.				Total (All foster children)
	Illegitimate		Legitimate		Total	Illegitimate		Legitimate		
1935.....	87	41%	12	6%	99	81	39%	30	14%	210
1936.....	60	29%	16	8%	76	75	37%	53	26%	204
1937.....	85	36%	22	9%	107	58	24%	73	31%	238
1938.....	92	38%	14	6%	106	69	28%	68	28%	243

Adoption of Children in Birmingham

A number of adoptions were arranged in conjunction with this Department during the year. Those initiated by the Department were solely in respect of children where it was impossible to keep the child with the mother.

The medical investigation of these children which is carried out at the Carnegie Institute prior to their adoption is much appreciated by the adopting parents. In two instances the children were proved to be unsuitable for adoption for medical reasons.

SUMMARY OF ADOPTIONS ARRANGED DURING 1938

<i>Applications to Adopt</i>		
(1) Application for adoption through :		
National Adoption Society		17
Homeless Children's Aid		9
Waifs and Strays		3
(2) Adoptions arranged on private application.....		91
(3) Adoptions of foster children by foster mothers.....		30
TOTAL		150
Total interviews		689
Total visits		372
<i>Homes Rejected:</i>		
Out of city applications	4	} 11
Other homes rejected	7	
Children legally adopted		98
<i>The following adoptions have been completed:</i>		
Private arrangement between mother and foster mother ..		25
Other privately arranged adoptions.....		14
<i>Children placed by Department for adoption:</i>		
(1) From foster mother for adoption.....		17
(2) Mother very unsatisfactory (repeated desertion).....		4
(3) Mother dead. Legitimate children		5
(4) Legitimate child unwanted (disputed paternity)		1
(5) Illegitimate child of widow		1
(6) Illegitimate child of married woman.....		2
(7) Mother unwilling to keep illegitimate child		20
Arranged by adoption societies		9
TOTAL		98

City Midwifery Service

The situation in relation to midwifery practice has materially altered since 1937, by the coming into operation of the Midwives' Act, 1936. Under this the city midwifery service has been established.

A table is given below setting out the midwives retiring under the Act, as well as the new appointments.

Year.	Midwives Retired.				City Midwifery Service.		Resigna- tions.
	Compulsory.		Voluntary.		Existing Midwives taken into City Service.	New Midwives Appointed.	
	City.	Private.	City.	Private.			
1938	3	3	6	10	2	26	21
1937	—	23	—	37	39	68	8
Remaining at end of year :						1938.	1937
City Midwives						97	99
*Independent Midwives....						45	59
TOTALS						142	158

*Including nine attached to the Maternity and Queen's Hospitals.

It will be seen that at the end of 1937 ninety-nine city midwives were in practice, as well as forty-seven independent midwives and twelve midwives working under the Maternity and Queen's Hospitals.

At this stage it was reported to the Ministry that Birmingham was now in a position to have Section 6 of the Midwives Act, 1936, put into operation, under which the practice of midwifery for gain by unqualified persons is prohibited ; and the Ministry in due course fixed June 1st, 1938, as the date from which such practice became illegal.

The number of handy women known to be practising in Birmingham at the commencement of the year 1938 was forty-eight. Of these, thirty-six were practising up to the time of prohibition, but many were only taking an occasional case. The number of handy women actually doing a large practice only amounted to twenty-six. The prohibition of the practise of midwifery by unqualified women did not cause any inconvenience in this city.

During 1938 it was decided to institute a Refresher Course at the City Maternity Home, Wake Green Road, and thirty-two midwives attended this Refresher Course during the year. The arrangements were only made for the local midwives, and all those attending expressed their appreciation. The Supervisors have reported an all-round improvement in the general work of the midwives following their attendance at the Refresher Course.

The City Midwifery Service has been instituted with very little friction. The only difficulties have resulted from a shortage of staff. It will be seen that the actual number at the end of 1938 was less than the number at the end of 1937. It was disappointing to find that so many of the midwives appointed stayed for brief periods only before resigning, many leaving to return to institutional work or on account of their marriage.

Many of the older midwives who had been taken into the Service and who were unaccustomed to full-time work, found themselves unable to carry out the work for health reasons. It is anticipated that further resignations will occur during 1939 on this account.

The number of independent midwives has naturally diminished, and here, too, a further fall is anticipated in the coming year.

The new training scheme for midwives instituted by the Central Midwives Board, with the approval of the Ministry of Health, will, it is feared, diminish the number of available midwives, at any rate for some little time, and the shortage of staff will probably continue to give anxiety.

The following table shows the resignations and appointments in the City Midwifery Service during the year. Of the ninety-nine midwives in the Service on January 1st, 1938, twenty-six had left at the end of the year and twenty-four new appointments had been made.

The average deliveries per annum per midwife were expected to be eighty under the original schemes. Midwives, however, have five weeks vacation per annum allowing for Bank Holidays, so that they must deliver approximately eight cases a month to reach this average. The situation is complicated by periods of sickness, which have often been lengthy and not only among the older women, for conditions such as fractured arm bone and acute appendicitis have occurred among the younger women.

Actually 130 weeks have been lost from sick leave. Taking this into consideration, and allowing for vacations, the average per midwife has been 7.1 cases per working month (or eighty-five cases per annum), which is very satisfactory in all the circumstances.

Making no allowance for vacation or sick leave the average was seventy-six cases per annum (6.3 cases per month).

*Resignations and Appointments in relation to number of Confinements
Attended*

At the commencement of the year the number of midwives was ninety-nine; of these twenty-six retired and there were twenty-four new appointments, leaving ninety-seven midwives at the end of the year.

<i>Period of Service.</i>		<i>Appointments in 1937.</i>	<i>Total Number of cases delivered in 1938.</i>	<i>Average Number of cases per midwife per month</i>
<i>From</i>	<i>To.</i>			
January ..	December .	73	5,627	6.4
" ..	November ..	5	350	6.4
" ..	October ..	1	92	9.2
" ..	September .	3	177	6.6
" ..	August ..	3	95	4.0
" ..	July ..	—	—	—
" ..	June ..	5	165	5.5
" ..	May ..	3	111	7.4
" ..	April ..	—	—	—
" ..	March ..	1	21	7.0
" ..	February ..	1	—	0.0
" 1..	January 31	4	1	(illness) 0.25

<i>Period of Service.</i>		<i>New Appointments in 1938.</i>	<i>Total Number of Cases Delivered.</i>	<i>Average Number of Cases per Midwife per month.</i>
<i>From.</i>	<i>To.</i>			
January ..	December .	8	572	5.96
February ..	" .	1	72	6.5
March ..	" .	—	—	—
April ..	" .	1	72	8.0
May ..	" .	1	37	4.6
June ..	" ..	1	51	7.3
July ..	" ..	2	75	6.25
August ..	" .	1	25	5.0
September .	" .	—	—	—
October ..	" ..	5	88	5.87
November ..	" ..	2	25	6.25
December .	" ..	2	7	3.5
January ..	October ..	1	35	3.5
April ..	September .	1	40	6.7

Number of Cases.....7,738

<i>Months of Service.</i>	<i>Midwives.</i>	<i>Total months of Service.</i>	<i>Average Number of Cases per midwife per month.</i>
12	81	972	—
11	6	66	—
10	2	20	—
9	4	36	—
8	4	32	—
7	1	7	—
6	8	48	—
5	4	20	—
4	—	—	—
3	6	18	—
2	3	6	—
1	6	6	—
	125	1,231	6·3
505 weeks, less months of holiday		116	
		1,115	6·9
130 weeks, less months of sickness		30	
		1,085	7·1

Supervision of Midwives

During the year 1938, 236 midwives notified their intention to practise in the city. Of these twenty-two resided outside the city, and therefore do not come under routine inspections. Of the remainder, five were temporarily employed and twenty-six were attached to various institutions.

The midwives sent for medical help in 3,738 cases, for the mother in 2,610 instances, and for the child in 1,128.

Reasons for sending for medical help :

MOTHER

CHILD

Delayed labour	480	Ophthalmia	738
Laceration of perineum ..	870	Prematurity	72
Hæmorrhage	253	Convulsions	11
Adherent placenta	72	Jaundice	23
Abnormal presentation ..	160	Deformity	57
Abortion or miscarriage ..	44	Skin eruptions	57
Rise of temperature	160	Other causes	170
Other causes	571		
TOTAL	2,610	TOTAL	1,128

Five midwives were suspended during the year—two with septic fingers, two as contacts with pemphigus neonatorum, and one as a (?)scarlet fever contact. In two instances it was found necessary to report a midwife to the Central Midwives Board.

The midwives attended 8,821 cases (47 per cent of the births and still-births occurring in Birmingham), and in 2,076 cases they acted as maternity nurses (11 per cent of the births occurring in Birmingham) ; total, 58 per cent. There were 142 midwives practising at the end of 1938, as compared with 150 in 1937.

The following table is of interest :

MIDWIVES' CASES: MEDICAL HELP CALLS

	1929.	1930.	1931.	1932.	1933.	1934.	1935.	1936.	1937.	1938.
Total cases attended	10,934	9,398	9,894	9,205	7,933	7,555	7,496	7,672	7,837	8,821
Total medical help calls . .	3,026	3,360	3,065	2,706	2,256	2,479	2,607	2,867	3,309	3,738
Percentage of calls	28	36	31	29	28	33	35	37	42	42
Reasons :										
Delayed labour	806	913	758	592	432	500	413	498	441	480
Lacerated perineum	674	775	708	620	539	550	580	660	754	870
Haemorrhage	190	213	220	186	158	165	179	182	198	253
Adherent placenta	85	79	61	71	56	75	55	69	79	72
Abnormal presentation	102	131	114	106	141	93	100	96	142	160
Discharging eyes	380	461	427	379	318	354	440	504	613	738
Other causes	789	788	777	752	612	742	840	858	1,082	1,165

The following visits were paid during the year by the Supervisors of Midwives :

Routine visits to midwives	278
Special visits to midwives	423
Visits to stillbirths	199
Visits after neo-natal deaths.....	199
Visits to Ophthalmia Neonatorum cases	1,208
Visits to Puerperal Sepsis cases	22
Visits to maternity nurses.....	100
Other visits	176
Unsuccessful visits	679
Number of interviews with midwives	2,235

District Midwifery

Apart from admission to institutions, 12,098 women were delivered in private houses—7,419 by municipal midwives, 1,318 by midwives attached to the Maternity and Queen's Hospitals, 2,160 by private midwives, and 1,201, the balance, at home, by doctors assisted by qualified monthly nurses, relatives or handywomen. In all private medical practitioners attended 3,808 confinements, or 20 per cent of the total.

Maternity Practice in Birmingham

The births occurring in the city during the year were as follows :

Births notified	17,886
Stillbirths notified	678
Failed to notify	227
TOTAL	*18,791

*This figure does *not* include Birmingham confinements occurring outside the city, but includes the confinements of a number of persons whose residence was outside.

Medical practitioners attended 20 per cent in the patients' homes and midwives 44 per cent, while 36 per cent of births occurred in institutions. This is set out in detail as follows :

DOMICILIARY MIDWIFERY

Cases at home attended by midwives :	
(a) No doctor engaged or present at birth.....	8290 = 44%
(b) No doctor engaged, but one called in for delivery....	531 = 3%
(c) Doctor engaged	2076 = 11%
	10,897 = 58%
The above figures include 1,016 cases attended by Maternity Hospital midwives and 302 by midwives attached to the Queen's Hospital.	
Cases attended at home by doctors assisted by nurses, other than midwives, by relatives or handywomen.....	1,201 = 6%

INSTITUTIONAL MIDWIFERY

Cases in Hospitals, Homes and Institutions:		
At Dudley Road Hospital	1,454	} 6,693 = 36%
Selly Oak Hospital	976	
Wake Green Road Home.....	845	
Heathfield Road Home	576	
Maternity Hospital	1,317	
Queen's Hospital	275	
Women's Hospital	17	
General Hospital	50	
Hope Lodge	43	
Private Nursing Homes	1,140	
TOTAL BIRTHS IN CITY		*18,791

*Excluding 437 Smethwick births in St. Chad's Hospital, which although inside the Birmingham boundary, is the Smethwick Municipal Hospital.

Consultant Service

During 1938 the general practitioners called in consultants 140 times under the Public Health Committee's Scheme :

For puerperal cases	18
For obstetric cases.....	122
TOTAL	140

Emergency Maternity Service

The Emergency Maternity Service for the domiciliary treatment of obstetric shock, hæmorrhage and other emergencies was used for twenty-four cases during 1938. In three cases the outcome was unfavourable ; one mother died of puerperal sepsis following the manual removal of a retained placenta with severe hæmorrhage ; the second died with collapse after delivery with a ruptured uterus. In the third case there was a retained placenta with post-partum hæmorrhage ; the Emergency Service was sent for, but before the ambulance arrived the patient collapsed and died a few minutes after the arrival of the outfit. In all the other cases the patients recovered.

The Service has been used to a much greater extent during the year. In 1937 it was only called out in eight cases. There can be no doubt that it is a valuable addition to the obstetric services of the city.

The conditions for which the Service was used were as follows:

Retained placenta and post-partum hæmorrhage.....	5
Post-partum hæmorrhage	11
Collapse following delivery	1
Ruptured uterus with collapse after delivery.....	1
Ante-partum hæmorrhage.....	3
Shock and hæmorrhage after abortion	1
Obstetric shock	2

Training of Midwives

During the year the new system of training pupil midwives was instituted by the Central Midwives Board, with the approval of the Ministry of Health.

The City Hospitals (Dudley Road and Selly Oak) and the City Maternity Home, Moseley, as well as the Birmingham Maternity Hospital, were recognised for the first period of training for the first certificate of the C.M.B. The city institutions accept trained nurses only as pupils, and have arranged courses with service carrying salaries, as well as the ordinary six months' course.

The City Maternity Home, Heathfield Road, Handsworth, was recognised for the second period of training for nurses wishing to take the full qualification for a midwife and to obtain the second certificate of the C.M.B.

District Training

Pending the establishment of the new scheme pupils continued to be trained under the old regulations. Nine city midwives were recognised for training pupils on the district, and 117 pupils were dealt with by them.

Recognised Refresher Courses

Under the new regulations framed by the Central Midwives Board all midwives are required to take refresher courses at approved institutions. The City Maternity Home, Moseley, has been recognised for this purpose in the West Midland area. These recognised courses, for which the Ministry of Health pay grants, commenced in January, 1939.

The Inspection and Registration of Nursing Homes

At the end of 1938 there were forty-four registered nursing homes in the city.

One nursing home was given up during the year because the owner was leaving the district. This was a small home for convalescent cases under twelve years of age.

Two new nursing homes were opened during the year, one for maternity cases and the other for chronic medical cases.

In addition, there were two new registrations due to change of owner and change in partners, two homes were registered for additional beds (twelve in one home and one in the other), one home was registered for surgical beds, and two homes gave up maternity cases.

Total number of beds in the Homes.....	476
Number of Homes which are equipped for surgical work.....	15
Number of Homes which take chronic or senile cases only.....	15
Number of Homes which take maternity cases only.....	*6
Number of Homes which keep some beds for maternity cases..	†19

*With 31 beds.

†With 63 beds.

Registration and Inspection

The following is the procedure in regard to the registration of nursing homes: on the receipt of an application for registration the proposed premises are inspected by a medical officer of the department, who informs the applicant as to the general alterations and adaptations that will be necessary. If the premises are considered suitable further inspections are made by a sanitary inspector, and officers of the Fire Department, City Surveyor's Department, the Electrical Supply Department, and, when necessary, the Gas Department. Recommendations are submitted to the medical officer of health, and the applicant is informed as to the work that will be required to make the house suitable for registration.

A final inspection is made of the nursing equipment and general accommodation by the medical officer before the house is recommended for registration.

Routine inspections are made of all nursing homes six-monthly, and, in addition, further visits are paid in relation to puerperal pyrexia and stillbirths, and occasionally in relation to complaints.

A good standard is required in regard to staffing and accommodation, and particular attention is paid to sanitary equipment, kitchens and larders, and the arrangements for the prevention of infection, especially in homes taking maternity cases. The advice of the medical officers of the Department is always available, and is frequently sought by the keepers of nursing homes, and by doctors in relation to their patients in the nursing homes.

Discovery of Unregistered Nursing Homes

The methods employed include the scrutiny of all advertisements in the local press and of the death returns and notification of births from this point of view.

Information may be received from the proprietors and matrons of other nursing homes, and occasionally from midwives and health visitors.

Residential Schools

There were fifteen residential schools on the register at the end of 1938. These are schools which take boarders under nine years of age, and which, therefore, come within the provisions of Section 219 of the Public Health Act, 1936.

One school closed during the year and two were put on the register. Inspections have shown that the conditions are satisfactory in these schools.

In no case does the total number of boarders under nine years of age exceed three in any school at present.

Voluntary Homes

The general supervision of voluntary homes was transferred to the Local Authority under the Public Health Act, 1936. These are Homes which receive young children under nine years of age, apart from their parents for maintenance and care.

There were fourteen such Homes on the register at the end of the year. Inspections have shown that conditions are, on the whole, satisfactory in these Homes. In one case there was definite overcrowding and inadequate playroom accommodation and sanitation. These facts were brought to the notice of the Authority concerned, and certain measures are in process of being taken to remedy the defects. In another institution the nutritional standards were found to be too low and the children's clothing inadequate.

Birth Control Clinics. Year ended 31st December, 1938

	<i>Dudley Road Hospital.</i>	<i>Selly Oak Hospital.</i>
(1) Number of women seeking advice :		
(a) Married women suffering from gynæ- cological conditions, making preg- nancy detrimental to health.....	34	11
(b) Married women suffering from other forms of sickness detrimental to them as mothers, in that child-bearing is likely to seriously endanger life.....	21	66
(c) Other cases not coming within the categories authorised by the Ministry of Health	10	14
(2) Number of women advised in birth control methods	55	77
(3) Number in which birth control advice was given but pregnancy resulted.....	6	*3

*All women who failed to attend regularly.

SECTION C.

Sanitary Circumstances

SECTION C.

SANITARY CIRCUMSTANCES

Water Supply

I am indebted to Mr. A. E. Fordham, Secretary to the Water Department, for the following particulars.

During the year ending 31st December, 1938, the Water Department has been engaged mainly on the extension of mains to provide adequate supplies for the large areas recently developed for building estates, and about ninety miles have been laid.

The 24-in. steel main from Tyburn to Kitts Green has been completed and the whole length of $3\frac{1}{3}$ miles is now in commission.

About $6\frac{1}{2}$ miles of 15-in. cast iron main have been laid in Castle Bromwich, Sheldon and Solihull.

A commencement has recently been made with $5\frac{1}{2}$ miles of 36-in. steel main from Highters Heath Reservoir to Solihull on the middle level zone.

The construction of the third line of pipes on the Elan Aqueduct has been continued steadily throughout the year, and the delivery into Bartley and Frankley Reservoirs is sufficient to meet the average daily demand in the city. It is anticipated that towards the end of 1939 the whole of the third main from the Elan Valley will be completed and available for use if required.

The enlargement of Northfield covered service reservoir was completed, and the reservoir brought into use early in 1938.

The construction of a new covered service reservoir at Perry Barr, near the northern boundary of the city, of a capacity of 18,000,000 gallons, has been commenced. This reservoir is designed to act as a balancing factor on the middle level zone which is supplied by gravitation from Frankley, some ten miles away.

The only case of possible risk of contamination arose when a failure occurred in January, 1938, on the 36-in. main at the point where it passes through the Drainage Board's Sewage Treatment Works at Water Orton. The Medical Officer of Health was notified, and, in consultation with his staff, the necessary protective measures were taken to ensure the purity of the supply before it was again taken into use.

In the event of any use having to be made of the well supplies, continuous chlorination is carried on at each station.

At all times during the year supplies have been satisfactory, both from the point of quality and quantity.

Routine Sampling of Water Supply

Two Inspectors are occupied part-time in taking samples from the waterworks at Frankley and Whitacre, from the Corporation deep wells at Longbridge, Aston and Shortheath, and from the three levels of supply in the city.

In addition to routine sampling for chemical analysis and bacteriological investigation, special visits are paid and samples taken after stripping or re-making of filters, and no filtered water is passed into commission until satisfactory results have been obtained. Again, in cases of emergency, where special work in the nature of structure or repair to storage reservoirs or mains has been undertaken, there is similar co-operation with the Water Department to ensure that no unwholesome water passes into supply.

The number of samples of Corporation water taken for examination during 1938 were : chemical, 199 ; bacteriological, 648.

Sampling of Well Waters

Bacteriological and chemical investigation of samples from private wells—some 300 in all—has been continued, 194 premises being visited during the year. These premises included private dwellings, farms, factories, hospitals, hotels and various institutions outside the city, but under the control of the Public Health Committee.

Use of Section 138 of the Public Health Act, 1936, has been made in a number of cases, where there has been evidence of pollution, to require the provision of a supply of water from the Corporation mains. In certain instances, however, properties have been found, by reason also of general disrepair, to be appropriate for representation under the Housing Acts. The condition of private well waters is naturally an important factor in the consideration of action which may be taken under the Housing Acts in respect of single houses or small groups of dwellings towards the outskirts of the city.

Under Section 41 of the Factories Act, 1937, thirty-three requests have been received for certificates of approval of factory drinking water, being other than that from Corporation mains, and the number of private well waters sampled has been further increased in this way.

Drainage and Sewerage

I have to thank the City Engineer and Surveyor for the following information. New sewers were constructed during the year 1938 with a total length of 46 miles.

The principal sewerage schemes completed during the year include the following :

Lea Valley and Kitts Green Sewerage, Section 2—Construction of outfall sewers to drain the Lea Hall Estate being developed by the Corporation. The scheme has allowed of the demolition of a number of dumbwells.

Perry Barr Sewerage, Section 5—Scheme carried out to provide for the development of a large area for housing by the First National Housing Trust, partly in the city and partly in the Aldridge Urban District. A number of properties draining to dumbwells have been connected to the new sewers.

Metchley Grange Valley Sewerage, Section 1, Part 2—A length of valley sewer reconstructed and enlarged, necessitated by housing development.

Bromford Road Surface Water Sewerage—Surface water sewers constructed in connection with the road widening.

Erdington Bye-Pass Sewerage—Construction of foul and surface water sewers.

Butlers Road Sewerage, Handsworth—Foul water sewer constructed and several dumbwells demolished and drains connected to the sewer.

The following schemes are now being carried out :

Babbs Mill to Gressel Lane and Mackadown Lane Outfall Sewer—Construction of outfall sewers to enable the area to be developed for housing by the Corporation, and also a factory site.

River Rea Improvement, Contract 4 (Sewerage)—This scheme provides for the reconstruction of the Rea Valley Main Sewer from Macdonald Street to near Sir Harry's Road, and is being carried out under the Birmingham Corporation (Rivers Improvement) Act, 1929.

River Rea Improvement, Contract 5—Good progress has been made on the length of the improvement of the River Rea between Moseley Street and the Bourn Brook, which is also being done under the above Act.

Rivers and Streams

The following particulars are derived from the Annual Report for 1938 of the Tame Basin Joint Committee :

Hydrographical Survey of the River Trent

A conference of the officers of the various interested authorities situated within the watershed of the River Trent was held on the 6th July, 1938, at Nottingham, for the purpose of discussing the results of the observations made in 1937.

An interesting fact has been confirmed in the published report upon these observations. In previous reports it has generally been observed, in connection with statements upon the deleterious effect the River Tame had upon the River Trent at their confluence, that the latter was the larger river. This opinion has rather exaggerated the effects of the Tame upon the Trent, and has been contested on behalf of this Committee at previous meetings, but it is only in the current report that the fact has been recognised.

Castle Bromwich has been considered the key position so far as certain observations made are concerned, because at this point the river has received the drainage from practically the whole of the built-up area supervised by the Joint Committee, and consequently it would be expected that at this position the effects of any continuous pollution by sewage and trade refuse would be revealed. It is observed, however, that only on one occasion during the past ten years has the dissolved oxygen saturation been below 50 per cent, and that was owing to the presence of storm water in the river during heavy rainfall. A further satisfactory feature is that during the past four years this saturation figure has been consistently maintained between 75 and 85 per cent.

After leaving Castle Bromwich the river flows a distance of fifteen miles through an agricultural area to Tamworth, and in its course receives the comparatively clean waters of the River Blythe. It would naturally be expected that under these favourable conditions the quality of the river water would improve, but the reverse is the case, and only on one occasion did the river at Tamworth approach the quality of the stream at Castle Bromwich.

These observations would appear to confirm the previously expressed opinion that the deterioration in the quality of the river after leaving Castle Bromwich is due to the decomposition of the organic matter which is discharged into the streams in the built-up area during storm conditions, and carried down stream and deposited in this section of the channel of the river.

In this connection it is interesting to observe the provision which has been made for dealing with storm sewage by the Engineer to the Birmingham Tame and Rea District Drainage Board.

At the Saltley Works of the Drainage Board the tanks provided for the reception of the excess flow of sewage during rainfall are greatly in excess of the capacity required by the Ministry of Health, with the result that the contents very rarely overflow to the stream. The storm sewage is impounded in them, to be later returned to join the incoming sewage and be passed through the complete purification process. The sludge deposited in these storm units is estimated by the Engineer to be nearly 25 per cent of the total sludge recovered in the purification process.

Admission of Trade Refuse to Sewers

In connection with the Drainage of Trade Premises Act it was recommended that consideration should be given to the subject of suggesting bye-laws for the admission of trade refuse to sewers which could be made generally applicable within the area of the Joint Committee. In the meantime model bye-laws have been framed by the Ministry of Health, and, in the opinion of the Committee, these appear to be capable of general application by the constituent authorities.

Provision is made in these bye-laws for the elimination of certain constituents of the trade waste which would be liable to cause injury or obstruction to sewers, and an excess of solids in suspension is stipulated in bye-law 3.

Birmingham City

The important work undertaken by the Birmingham Tame and Rea District Drainage Board during the current year has been the completion and bringing into operation of the remodelled Yardley sewage disposal works. The new work consists of screening and detritus chambers, fitted with mechanical raking and elevating plant, liming plant and aerating tanks, sedimentation tanks with Dorr mechanical sludge scraping equipment, aeration plant for the partial purification of the tank effluent, and humus separating tanks. The existing bacterial filtration area has been reconditioned and new distributors erected.

The capacity of the Colleshill sewage disposal works is being trebled, and good progress has already been made with the construction of the necessary additional storm sewage settling tanks and the activated sludge separating tanks.

The large flow of sewage reaching the Minworth works has continued to be effectively purified.

With reference to the complaint of the offensive condition of a small stream, due to the drainage from piggeries, these have now been demolished and the source of the pollution removed.

A complaint has been received, through the Medical Officer of Health, of the pollution of a watercourse. Upon investigation two sources of pollution were found to be discharging to the stream by a surface water sewer.

In the first instance liquid waste was being produced in the process of polishing motor bodies with water containing powdered slate. The waste liquids were being discharged after settlement in a catch-pit, but, owing to neglect in regularly removing the deposited material from the catch-pit, the overflow was causing a grey discoloration of the stream. Instructions were immediately issued for the catch-pit to be cleaned out regularly, and no further cause for complaint has been observed.

A further source of pollution was found to be at premises where insulators are cleaned in water containing a bark extract, which caused a dark brown discoloration when discharged to the stream. The process was originally operated in a portion of the premises where the liquid waste was connected with the sewer, but upon being transferred to the present site the waste was inadvertently connected to a surface water drain. Instructions have now been given for the waste to be again diverted to the foul sewer.

A complaint has been received from the Manager of the City Parks Department of the polluted condition of the feeder of Perry Park pool, due to the presence of liquid waste from the gravel washing process.

The liquid waste at one of the premises concerned is flocculated with a lime, starch and caustic soda compound in a Dorr type settling tank, and the effluent is circulated for re-use in the washing process. The liquid sludge and any excess effluent are discharged for settlement in a lagoon, and the overflow from this is discharged to the stream. The surface drainage is collected in a tank and pumped to the Dorr tank, but during heavy rainfall there is liable to be an overflow to the stream from this source.

The stream water, after receiving the effluent from these premises, is used in the washing process at further works. At these premises a new washing plant of increased capacity has been brought into operation, and the liquid waste is discharged for settlement in a series of lagoons before reaching the stream. The material deposited in the lagoons is continuously being removed by means of a mechanical digger, and, provided the settling capacity is maintained, the overflow to the stream should be reasonably good, but, owing to the marly nature of the workings, it is almost impossible to eliminate the colour from the effluent.

Undertakings were given in both instances that every possible precaution would be taken to prevent the pollution of the stream.

The liquid waste produced at a new metal factory is precipitated with milk of lime in settling tanks, and the overflow is discharged to the stream. A chrome washing process has been introduced since the treatment works were designed, and these liquids are passing through the treatment process unaltered in character, and are having a marked effect upon the stream. The composition of salts, which are stated to practically eliminate chrome, has been experimentally arrived at, and a full scale test is being carried out to ascertain the effect upon the liquid waste.

The liquid waste produced at two extensive factories is now being precipitated with milk of lime in settling tanks, and the effluent to the stream has proved to be satisfactory.

A further extensive new factory is in course of erection at which it is proposed to operate processes in which liquid trade waste will be produced, but no information is yet available as to the volume and character of this waste. In the meantime, therefore, a site has been reserved on the line of the discharge drain upon which treatment works can be constructed.

New factory extensions are being undertaken at a number of premises at which it is proposed to operate processes in which acid will be used, but in each case provision has been made for neutralising the waste liquids before discharging them to the sewer.

Closet Accommodation, Scavenging and Refuse Disposal

I am indebted to Mr. Codling, General Manager of the Salvage Department, for the following information :

Cesspools.—At December 31st, 1938, there were 215 cesspools in the city, serving 405 premises, receiving attention by this Department. During the year eighty-four cesspools were abolished, and the premises connected to main drainage. Seven new cesspools were added to the Department's records during the year. The cesspools abolished during the year were situated mainly in the Yardley and Sheldon areas, for which main drainages have now been provided. The position regarding cesspools in the city at present appears stationary as no sewerage schemes are in hand which would allow the remaining cesspools to be abolished.

Privy Pans.—The Department is regularly emptying 415 privy pans and during the year twenty-six have been abolished, partly due to demolition of premises and partly by provision of sewers. There are no privy pans serving premises in populous areas of the city.

Privy Middens.—There are still seventy-nine privy middens receiving regular emptying service from this Department, a reduction of ten middens as compared with the previous year.

Refuse Collection.—There have been no major developments during the year in this service. House refuse is normally collected at weekly intervals except in the case of the central city areas and at certain blocks of flats in the city. Refuse is generally removed from flats twice per week, and from large central city premises, including hotels, restaurants and cafes, a daily collection of refuse is usually provided.

Disposal of Refuse.—Practically the whole of the house, trade and market refuse produced in the city is dealt with at the five Refuse Disposal and Salvage Works of the Department. Details of the quantity of refuse disposed of are as follows :

<i>How disposed of.</i>	<i>Year ended December, 1938.</i>
	Tons.
Treated at Works	270,630
Disposed of at Tips.....	2,494
Treated in Organic Plant	5,706
Cesspool contents to sewers	52,688
TOTAL	331,518

The extensions to the Department's plants at Redfern Road, Tyseley, and Brookvale Road, Witton, have been completed and both plants now possess adequate capacity to deal with probable developments in the respective areas for a number of years hence.

Refuse received from the various city markets and abattoirs is dealt with at the main works of the Department at Montague Street, where an organic plant is in operation. The materials dealt with at this plant include condemned meat, fish, offal, vegetable refuse, etc., the material being converted into fats, feeding meals and fertilisers.

Sanitary Inspection

The work of the general sanitary inspectors has been carried on steadily and vigorously throughout the year, and the following statement indicates the main headings under which visits were paid :

For systematic house inspection	57,320
For housing complaints	57,584
For infectious diseases	6,831
For inspection of courts	3,029
For inspection of manure receptacles	1,072
For inspection of drainage (construction or repair)	3,966
For drain tests (smoke or water)	645
To common lodging houses	1,629
To houses let in lodgings	4,238
To tents, vans and sheds	90
To offensive trade premises	282
To workshops and factories, etc.	7,018
Under the Rats Order	4,156
Public house examinations	862
For miscellaneous complaints	7,089
To see owners or agents	3,761
For other purposes	19,287
Unsuccessful visits	11,445
TOTAL VISITS AND RE-VISITS	190,304

The total number of dwelling-houses inspected was 11,819, of which 3,763 were examined in the course of the systematic house-to-house inspection of selected streets. The remaining houses inspected were largely those in respect of which a complaint had been received. Of the total of 11,819 examined, 9,660 were found to need repairs of some kind. During the year notices were served for the following work to be done :

Houses to be disinfected	897
Repairs to houses	131,162
Houses to be cleansed by owner	4,099
Houses to be cleansed by tenant	36
Houses to have better ventilation	945
Houses to have separate water supply	323
Houses to be provided with damp course	230
Water or filth to be removed from cellars	224
Spouting to be put in order	4,805
Water closets to be repaired or reconstructed	7,043
Water closets to be cleansed	1,685
Additional water closets to be provided	206
Wash houses or ashplaces to be repaired or limewashed ..	3,705
Soilpipes to be repaired or removed	181
Defective drains	1,480
Additional drains needed	312
Sanitary sinks to be provided	372
Sink bend pipes to be repaired	711
Yards to be paved or repaired	1,796
Accumulations of rubbish, manure, etc., to be removed ..	303

Internal water supply has been provided to 265 houses and four wash-houses which previously had to rely on a tap in the yard. This work has been carried out under the provisions of the Birmingham Corporation Act, 1929, under which the Corporation bears half the approved cost of the work. The amount expended in this way during 1938 was £851 1s. 3d.

Closely connected with an adequate water supply inside the house is the provision of a suitable and efficient sink. During this year 372 sanitary sinks were provided and 711 sinks were put in order.

In 4,135 cases the notice related to the cleansing, in 1,190 to the painting and in 945 to the improvement of ventilation of premises.

A large amount of work was done in improving yards and out-buildings. Notices were issued for thirty-four additional water closets to be provided, for 1,685 closets to be cleansed and made free from obstruction, and for 7,043 to be repaired. Repairs or additions to the drainage were required in 2,014 cases, and the improvement of wash-houses or ashplaces in 3,705 instances.

A staff of five men is engaged in cleansing some of the worst courts in the city, together with the water closets and ashplaces situated in them, subject to an agreed charge being paid by the owners of the houses. The total number of cleansings effected during the year was 5,557, eighty-five courts being dealt with weekly. In the course of this work a large number of water closets and drain traps were cleared of obstructions.

The total number of notices served during the year was 14,092, of which 8,183 were preliminary informal notices, and 5,909 were statutory notices.

The summonses taken out during the year were as follows :

General nuisances	8
Houses let in lodgings	1
Excessive smoke	7
Shops Acts	122
Milk and Dairies Acts	15
Dogs fouling footpaths	12
Offensive trades	1
Common lodging houses	2
Provision of inside water supply	4
Disobeying Magistrate's Orders	2
TOTAL	174

Offensive Trades

Premises registered for the carrying on of offensive trades in the city are classified as follows :

	<i>Premises.</i>	<i>Visits paid by Inspectors.</i>
Tripe boiler	30	91
Rag and bone dealer	19	135
Blood boiler	—	—
Bone boiler	1	3
Fellmonger	5	8
Tanner	1	2
Soap boiler	1	3
Fat extractor	2	12
Gut scraper	3	30

The following defects have been dealt with in regard to these premises during the year:

Cleansing of premises	17
Removal of refuse	1
Provision of storage for materials	1
Cleansing or repairing w.c.s	1
Other defects	3
TOTAL	23

In the case of a firm of gut scrapers, a new building has been constructed and a chlorine deodorising plant installed.

Common Lodging Houses

At the end of the year there were eighteen registered common lodging houses in the city, affording accommodation for 1,292 males and eighty-six females.

It is satisfactory to note that the unusually high standard of cleanliness and sanitation established in these premises in Birmingham continues to be maintained.

Number of houses on register (for males only)	16
Number of houses on register (for females only)	2
Number of lodgers allowed	1,378
Number of day visits	1,222
Number of night visits	164
Number of special visits	236
Defects found	99
Number of summonses	—

Houses Let in Lodgings

At the end of the year there were 468 houses let in lodgings on the register, containing 3,160 rooms.

They were let as follows :

Number of Rooms let as single rooms	1,077
Number of Lets of two or more rooms together.....	812
Certified Accommodation (persons)	6,352

The visits and re-visits paid during the year numbered 4,238, an average of nine per house.

Notices were served for the following matters :

Repairs ordered	2,116
Overcrowding	2
Cleansing required	155
Provision for cooking	66
Provision for food storage	138
Fire extinguishers needed	116
Lighting on stairs	60
Water supply	20
Other defects	171
Summonses issued for non-compliance with bye-laws	1

The standard of accommodation continues to be of very poor quality in a large number of houses let in lodgings, and the evil of sub-letting by persons unable or unwilling to live up to their responsibilities as landlords continues to be a serious factor in the housing difficulties of this unfortunate section of the community. A certain number of the worst houses have been represented, and as alternative housing accommodation becomes available some improvement is likely to follow.

Tents, Vans, and Sheds

The number of visits paid to these by the inspectors was ninety. In a number of cases particulars were referred to the City Surveyor with a view to action under the Birmingham Corporation (General Powers) Act, 1929.

Canal Boats

During the year 1938 the number of boats inspected on the canals within the city area was 1,214, and the number of inspections during each quarter is shown as follows :

During the first quarter of the year 335 boats were examined.							
"	"	second	"	"	"	289	"
"	"	third	"	"	"	248	"
"	"	fourth	"	"	"	342	"
TOTAL.....						1,214	

The 1,214 boats inspected were registered for the accommodation of 3,678½ persons, and when inspected were found to be carrying 1,401 men, 813 women and 708 children, a total of 2,922 persons, represented in terms of adults as 2,568.

The following table shows the number of boats inspected during the last five years, giving the number of persons whom the boats were registered to accommodate and the actual number of occupants at the time of inspection :

Year.	No. of Boats Inspected	Registered to carry (Adults).	Actually occupied by :			Total Occupying.	Equivalent to Adults.
			Men.	Women.	Children.		
1934	1,143	3,448	1,410	817	711	2,938	2,582.5
1935	1,107	3,332.5	1,376	717	677	2,770	2,431.5
1936	1,162	3,409	1,387	787	682	2,856	2,515
1937	1,207	3,726.5	1,331	915	810	3,056	2,651
1938	1,214	3,678.5	1,401	813	708	2,922	2,568

Of the 1,214 boats inspected during the year it was found that 1,089 or 89·7 per cent were in good condition and conforming with the Acts and Regulations, while in 125, or 10·3 per cent of the total, various contraventions were found. These are classified thus :

Boats with 1 contravention each ..	34	Making total contraventions ..	34
„ 2 contraventions ..	57	„ „ „ ..	114
„ 3 „ „ ..	23	„ „ „ ..	69
„ 4 „ „ ..	9	„ „ „ ..	36
„ 5 „ „ ..	2	„ „ „ ..	10
TOTAL	125	TOTAL	263

Complaint notes were duly served on the owners in all cases; 125 complaint notes were issued during 1938, and fifteen were brought forward from 1937; 111 notices were complied with during the year, leaving an outstanding balance of twenty-nine.

During the year certificates were returned by owners signed by the various canal boat inspectors, showing that 237 contraventions had been remedied.

The following table shows the number and character of contraventions found and remedied during the year :

<i>Contraventions referring to</i>	<i>Outstanding and brought forward from 1937.</i>	<i>Found during 1938.</i>	<i>Remedied during 1938.</i>	<i>Carried forward to 1939.</i>
Cabins requiring repairs ..	11	62	57	16
Cabins requiring painting..	9	52	46	15
Cabins leaking	11	55	51	15
Requiring lettering	1	35	30	6
Registration	2	23	19	6
Not producing certificate .	—	13	11	2
Dirty cabins	1	7	8	—
Overcrowding.....	1	6	6	1
Separation of sexes	—	1	1	—
Water vessels	—	—	—	—
No pumps	—	1	1	—
Ventilation	—	1	1	—
Bilge water not removed..	—	—	—	—
Registration certificate not identifying owner of boat	—	1	1	—
Cabins not habitable	—	5	4	1
Occupying flyboat as ordinary	—	1	1	—
TOTALS	36	263	237	62

It has not been necessary during the year to take any court proceedings under the above Act or the Canal Boat Amendment Regulations, 1925, all works being well carried out by owners.

Infectious Disease

One case of pulmonary tuberculosis occurred during the year, the patient being a woman aged twenty-eight, occupying the boat *Stanley*, No. 1520, Birmingham. The patient was removed to hospital in this city. Full enquiries of the boat's movements were made and all bedclothing, wearing apparel and the cabin were disinfected and thoroughly cleansed. The boat was then allowed to proceed. The owners were duly notified.

Registration of Boats

There was a net increase of two boats registered at Birmingham during the year 1938, thus bringing the total to 612.

The following are details of registration and re-registration.

<i>Registration :</i>	
New motor boats registered	1
New ordinary boats registered.....	—
New steam boats registered	—
<i>Re-registrations :</i>	
Structural alterations	7
Change of owner and boat	1
Flyboat to ordinary	1
	10
Registration cancelled	8
Increase in number registered	2

The number of boats on the Birmingham register for the last five years has been as follows:

<i>December 31st.</i>	<i>Boats on Register.</i>
1934.....	567
1935.....	589
1936.....	612
1937.....	610
1938.....	612

The 612 boats on the register are classified as follows :

Ordinary boats	495
Motor boats	117
Steam boats	—
TOTAL	612

Factories

The visits paid under the Factories Act, 1937, numbered 7,018. As a result of these visits notices were served as follows :

Want of cleanliness	260
Inadequate ventilation	24
Overcrowding	2
Inadequate drainage of floors	2
Other nuisances	264
Insufficient sanitary accommodation	24
Unsuitable or defective sanitary accommodation.....	719
Sanitary accommodation not separate for sexes.....	12
Illegal occupation of underground bakehouses.....	—

The arrangements made with H.M. Superintending Inspector of Factories for the Midland Area to co-ordinate the work of his office with that of the Public Health Department continue to operate harmoniously.

The number of premises on the register is 2,259, and the visits of inspection paid to them numbered 1,824. In addition, 2,480 visits were made to factories, 86 to workplaces, 1,995 to food preparing factories, and 633 to outworkers' premises.

Rats and Mice

Throughout the year the provisions of the Rats and Mice Destruction Act have been systematically administered. Special measures were taken during National Rat Week, which was observed from November 7th to November 12th.

During this week a campaign against rats was carried out in Birmingham. Some 1,800 circulars were issued to various premises, including food stores, warehouses, etc., where rats were suspected. The occupiers were specially requested to make an effort to exterminate rats and to keep a record of their activities.

The following is a summary :

Premises rat-proofed	88
Premises where rat catchers were employed	74
Premises where baits and traps were extensively used	338
Premises which were repaired on account of rats.....	143
Number of rats caught	2,176

In addition efforts were made by various large industrial undertakings and Departments of the Corporation.

The Markets and Fairs Department during this week laid down 520 baits; 51·9 per cent of these were taken, forty-one rats killed, and two rats found dead.

The Salvage Department laid down 3,196 baits, 70·2 per cent being taken and some 300-400 rats were destroyed by parties of men.

The Great Western Railway Company laid down some 450 baits; 17·7 per cent of these were taken, and ten dead rats were found.

The Public Works and Town Planning Department laid down 2,461 baits, 76 per cent of which were taken, and seven dead rats were found.

The London, Midland and Scottish Railway Company during this week laid down 3,489 baits, 42 per cent of these were taken, and twenty-four dead rats were found.

Further special efforts were made during this week by the Birmingham Canal Navigations Company, Messrs. Fellows, Morton and Clayton,

Limited, and the Grand Union Canal Company, and whilst no actual figures are available we are informed that the results have proved quite satisfactory in each of these cases.

The approximate number of rats killed, therefore, is 2,600.

Supervision of Shops

There are some 27,000 shops in the city area and four inspectors are employed whole-time to carry out the work of inspection in relation to the undermentioned legislation :

Shops Act, 1912.

Shops (Hours of Closing) Act, 1928.

Shops Act, 1934.

Shops Act, 1936.

Butchers' Closing Order, 1921.

Shops (Sunday Trading Restriction) Act, 1936.

Retail Meat Dealers' Shops (Sunday Closing) Act, 1936.

Closing Orders under the Shops Act, 1912, apply to hay and straw dealers, corn dealers and seedsmen, and pawnbrokers, who are required to close their premises for a half-holiday on a specified day in each week, Wednesday or Saturday being the day selected. The Butchers' Closing Order, 1921, requires these traders to close their shops at 7 p.m. each evening except Friday, when they may remain open until 8 p.m.

Exemption Orders are in force relating to grocers' shops and photographic studios, which are not required to close for a weekly half-holiday.

The work of the four inspectors during the year is summarised as follows :

NUMBER OF VISITS PAID

General Inspection visits	5,091
General Inspection re-visits	2,771
<i>Special Visits regarding :</i>	
Night closing of shops (1928 Act)	1,437
Half-day closing of shops (1912 Act)	414
Appointments <i>re</i> 1934 Shops Act	172
Number of streets patrolled by day (1912 Act)	1,146
Number of streets patrolled by night (1928 Act)	2,082
Sunday patrol (Sunday Trading Restriction Act, 1936)	1,615
Patrol (Butchers' Closing Order, 1921)	648
TOTAL	15,376

OFFENCES REPORTED, ETC.

Early Closing Notices not exhibited (1912 Act)	433
Assistants' Weekly Half-holiday Notice not exhibited (1912 Act)	278
Young Persons Notice not exhibited, Form H (1934 Act)	294
Young Persons Notice not exhibited, Form J (1934 Act)	7
Young Persons Notice not exhibited, Form F (1934 Act)	293
Not providing seats for Female Assistants (1912 Act)	77
Not exhibiting Form K (seating accommodation) (1934 Act)	223
Number of shops not exhibiting Form G (overtime) (1934 Act)	15
Exempted Trades Notices not exhibited (1912 Act)	367
Not closing to time (evenings) (1928 Act)	272
Not closing to time (half-day) (1912 Act)	87
To provide w.c. accommodation (1934 Act)	18
To provide suitable ventilation	2
To provide suitable heating	2
To provide accommodation for meals	14
To provide washing facilities	12
Mess Rooms to be cleansed	16
Nuisances reported	76
TOTAL	2,486
Summonses issued	122
Summonses withdrawn	4

During the year proceedings were taken against 122 shopkeepers as a result of contraventions of the Shops Acts and Closing Orders. Fines were imposed in 118 cases and in four cases costs only were imposed.

Proceedings were taken against ten butchers for keeping their premises open after the hour permitted under the Closing Order (1921), and fines ranging from 10s. to 50s. were imposed.

Ninety-six shopkeepers were prosecuted under the Shops (Hours of Closing) Act, 1928, for the sale of prohibited articles at a time when their premises were legally open for the sale of exempted goods, and fines ranging from 10s. to £5 were imposed, one defendant being required to pay costs only.

Under the Shops Act, 1912, proceedings were taken against four shopkeepers for failure to comply with the Half-day Closing Regulations. Of these, one was fined £2 and three defendants paid costs.

Two retail meat dealers were prosecuted for contravention of the Retail Meat Dealers' Shops (Sunday Closing) Act, 1936, fines of 20s. and 40s. being imposed.

Under the Shops (Sunday Trading Restriction) Act, 1936, warning letters were sent to thirty-one shopkeepers who had contravened the Act, and in ten cases proceedings were taken against shopkeepers reported for failure to comply after receipt of a warning letter. Fines ranging from 5s. to £1 were imposed. During the year special visits have been paid in

connection with the administration of this Act. It was provided for in the Act that certain commodities, detailed in the Second Schedule to the Act, should be exempted until nine months after the date upon which the Act came into effect. This period terminated at the end of January, 1938.

Local opposition to the Act resulted in a plebiscite being taken to ascertain the demand for a Partial Exemption Order allowing sale of the goods detailed in the Second Schedule, such exemption order to be granted in accordance with the procedure laid down in the Act. Voting cards were forwarded to all the shops concerned in the city, but the votes cast in favour fell far short of the two-thirds of the total which are required to support the making of such an Order. The figures were as follows :

Cards sent out	6,221
Votes in favour	2,405
Votes against.....	981
*Votes invalid.....	216
Cards not returned	2,619

*Votes were considered invalid either because the card was not completed or because the principal trade or business was not such as to render the occupier eligible to vote.

In view of continued complaints in certain areas of the city, even after the result of the voting for the city as a whole, the results of these particular areas were assessed separately, and there also the number voting in favour was quite inadequate.

During the year an application was received from the Birmingham Fruiterers' Association that a vote should be taken among local fruiterers to ascertain whether a compulsory half-day Closing Order under the Shops Act, 1912, should be made. The results, however, failed to reveal any justification for the making of such an Order :

Cards sent out	1,069
Voted in favour.....	507
Voted against.....	74
Did not vote	488

The number not voting is especially notable, as Inspectors called at each of the shops concerned to collect the voting card, and the shopkeeper was not therefore put to the inconvenience of having to post his reply.

Smoke Abatement .

Industrial expansion within the city boundaries continued through the year, and although activity in some branches of the many manufacturing and specialised trade processes diminished, other branches forged ahead, and maintained the balance.

Legislation Governing Smoke Emissions

The Birmingham Corporation Acts, Bye-laws and the relevant sections of the Public Health Act, 1936, comprise the legislation under which inspectorial and statutory work is carried out.

Industrial Smoke—Boiler Plants

Heavy smoke emissions from the chimney stacks of boiler plants indicate waste of fuel, heat loss and a corresponding drop in boiler-plant efficiency, and it is through this economic aspect that advisory work obtains the best results.

Metallurgical Furnaces

During the year a number of large non-ferrous metal manufacturing firms have carried out considerable reconstruction and alteration to their reheating and annealing furnaces. Large electric furnaces have been laid down, taking the place of oil-fired and coal-fired plant. The initial cost is in most cases considerable, but manufacturers maintain that over an annual period of continuous running the perfect heat control, the ease of obtaining a reducing atmosphere within the furnace, and the reduction in maintenance costs, justify that initial outlay.

Grit Emissions from Industrial Plants

Several cases have been investigated and the necessary advice given while legal proceedings have in certain instances been taken. It should be remembered, however, that whilst the cost of installing flue-gas cleansing apparatus in large plants using a low grade fuel with forced draught may be justified on economic grounds, the best remedial measure for small plant is to change over to a better grade of fuel with reduction of draught.

Domestic Smoke

The increase in the use of gas, electricity, coke and smokeless fuels for heating and cooking is slow but certain. It seems that the English love of the open hearth and blazing coal fire, as far as the main living room is concerned, will always remain despite the fact that it means daily dirty routine for the housewife in dealing with the dust, soot and ash that accompany the coal fire, and so collectively we get hundreds of homes with their smoky domestic chimneys contributing their share to the soot laden and acid atmosphere of our city.

The following table sets out particulars of observations on chimneys other than those of private dwelling-houses :

	1938.	1937.	1936.	1935.	1934.
Total number of observations	6,817	7,734	5,537	5,096	5,127
<i>Reports to Public Health Committee on Excessive Smoke Emissions :</i>					
Black smoke from boiler plants	60	74	69	104	71
Black smoke from boilers and furnaces	7	3	13	12	8
Black smoke from metallurgical furnaces	13	12	16	28	22
Excessive grit emissions	2	1	3	3	1
Excessive emissions other than black smoke	28	29	37	—	—
Total number of excessive emissions ..	109	119	138	147	102
Number of prosecutions	8	7	12	14	4
Number of convictions	8	7	12	14	4

Twenty-eight notices have been served under the Public Health Act, 1936, dealing with smoke emissions other than black.

Noise Abatement

These complaints, which are on the increase, are subject to the legal provisions of the Birmingham Corporation Act, 1935, Section 58. Legal powers under this section are somewhat limited, but advisory work with a tactful approach frequently gains the co-operation of the management of industrial premises, and has resulted in the introduction of remedial measures.

Vibration

This Department has no legal power to act in regard to vibration as such, but in the majority of cases, complaints also refer to noise. Where remedial measures for noise can be introduced, however, the cause of the vibration is frequently removed.

Fumes

Industrial fumes accompanied by effluvia and being prejudicial to the health of, or a nuisance to, the inhabitants of the neighbourhood, have given rise to many complaints during the past year. Such fumes as those from spent hop-drying, cellulose spraying, enamelling stoves, phosphor-bronze casting, and varnish manufacture have been dealt with.

Several complaints in regard to sulphurous fumes from the heating apparatus in the basement of large blocks of flats have also been investigated. These flats are fitted with central heating and hot water apparatus,

and investigations have shown that the draught has been inadequate, causing the carbon monoxide and sulphurous fumes to percolate through the boiler settings and doors into the basement boiler house and even into the ground floor rooms.

Dust

This expression “ dust ” does not include dust emitted from a chimney as an ingredient of smoke. Such atmospheric pollution can be dealt with under the Public Health Act, 1936, Section 92, para. (d). Investigations in relation to complaints of dust deposits from brick-crushing plant, metallic and wood dust from grinding and sandpapering machines have resulted in remedial measures being installed.

In cases where defective cyclone apparatus has been the source of the pollution, the investigations and remedies have been carried out in association with H.M. Inspector of Factories.

Swimming Baths and Pools

Close supervision of the following swimming baths has been continued :

	<i>Premises.</i>	<i>No. of Baths</i>
Corporation indoor swimming baths	17	27
Corporation open-air baths	2	2
Education Department	2	2
Home Office schools	2	2
Business firms	1	3
TOTALS	24	36

Public Baths

I am informed by the General Manager and Secretary of the Baths Department that, as regards the two baths maintained during 1937 by the emptying and refilling process, mechanical filtration and sterilisation was, during the year, adopted at Northwood Street, and a similar step is being taken with regard to Tiverton Road Bath. Thus, by the commencement of the summer session 1939 the water of all indoor public swimming baths will be maintained by mechanical filtration and sterilisation by chlorination or chloramination.

The monthly bacteriological examination of samples has shown that a good standard has been maintained in all indoor establishments—bact. coli having been found in only four out of a total of 244 samples.

The quantitative test for free chlorine has been continued, and while the adopted standard of 0.2-0.5 parts per million has not been attained consistently in all baths, in only seventeen out of 236 samples was there an absence of free chlorine.

The results of examination of samples taken from the two open-air baths at Cannon Hill Park and Victoria Park (Small Heath) have proved to be less satisfactory both from a bacteriological and a chemical standpoint, and I am informed that a proposal has been submitted that these open-air baths be discontinued.

Private Baths and Pools

Samples from seven such baths were taken regularly throughout the season, those from the four baths sterilised with chlorine liquid by hand giving less satisfactory results than those sterilised with chlorine gas and mechanically controlled.

During the year application was made for the approval of bye-laws, drafted in accordance with the Model Bye-laws issued under the Public Health Act, 1936, Section 233. These bye-laws were confirmed by the Minister of Health and came into force on 1st December, 1938.

Eradication of Bed Bugs

Infested houses are liberally sprayed with an insecticide. Before infested furniture is removed from slum dwellings to new Corporation houses it is collected in specially-made vans and treated with HCN gas ; 1,509 homes of furniture were so treated during 1938. This collection and treatment is carried out by the Local Authority.

The Estates Department have sixteen women visitors engaged on house-to-house visitation ; part of their duties consists in the inspection of the tenant's furniture, and in particular bedding, as well as a general inspection of the house itself. In all cases where vermin is found the matter is brought to the notice of the tenant by the visitor, who points out the methods which they must take to get rid of the vermin and also prevent a recurrence.

The following information is given in the form required by Circular 1728 of the Ministry of Health:

Number of council houses infested	1,199
Number of council houses disinfested	1,199
Number of other houses found to be infested	1,175
Number of other houses disinfested	135

Infested houses are sprayed twice with vermicine and zaldecide (Public Health Department) or with concentrated clenol (Estates Department).

The whole of the furniture, etc., from dwellings due for demolition is subjected to disinfestation by hydro cyanic gas, on the day in which the family are transferred to a Corporation house.

This work is carried out by the local authority.

Where Corporation houses under the management of the Estates Department are found to be infested an order for disinfection is given and the chief Woman Visitor is notified. She arranges for a visitor to keep the house under observation, making periodical inspections until she is satisfied that the premises are clear of vermin and, if, in her opinion, further spraying is necessary this is carried out. This Woman Visitor instructs the tenants with regard to the manner in which further infestation can be avoided.

Disinfection

The following table gives details of the work done during 1938 :

Houses disinfected after small-pox	—
Houses disinfected after scarlet fever	68
Houses disinfected after diphtheria	1,573
Houses disinfected after enteric fever	10
Houses disinfected after tuberculosis	1,733
Houses disinfected after cancer (on request)	77
Houses disinfected after miscellaneous diseases (on request) ..	1,259
Beds disinfected	3,152
Miscellaneous articles of clothing and bedding	39,462
Library books disinfected	1,204
Public conveyances disinfected	4

Mortuary—Summer Lane

This building, provided by the generosity of Mr. and Mrs. T. Sidney Walker in 1931, and handed over to the Public Health and Maternity and Child Welfare Committee in 1934, has continued to serve the Summer Lane area as a means of providing a resting place to which the dead could be brought and remain until the time for burial, instead of being kept in small houses with living relatives. During the year 1938 the building was used for the temporary reception of the dead on fifty-three occasions.

SECTION D

Housing

SECTION D

HOUSING

New Houses

Data received from the City Engineer and Surveyor show that 3,003 houses were built by the municipality and 7,804 by private enterprise during 1938. The houses built by the Corporation are for the working-class, while those built privately have generally been of a larger type. The houses built year by year since 1920 are shown in the subjoined statement:

<i>Year.</i>	<i>No. of Houses Erected.</i>		<i>Total.</i>
	<i>By Private Enterprise.</i>	<i>By Corporation.</i>	
1920	244	553	797
1921	426	970	1,396
1922	382	810	1,192
1923	556	1,621	2,177
1924	1,201	1,992	3,193
1925	1,774	3,215	4,989
1926	1,775	5,159	6,934
1927	2,445	4,007	6,452
1928	1,487	3,505	4,992
1929	2,456	4,359	6,815
1930	1,738	6,715	8,453
1931	1,983	3,919	5,902
1932	2,159	1,737	3,896
1933	3,028	2,029	5,057
1934	4,226	837	5,063
1935	6,265	985	7,250
1936	6,926	2,285	9,211
1937	7,662	2,643	10,305
1938	7,804	3,003	10,807
TOTALS ..	54,537	50,344	104,881

The wards in which new houses have been built in 1938 are indicated below:

Ward.	No. of Houses Erected.		Total.
	By Private Enterprise.	By Corporation.	
CENTRAL WARDS :			
St. Paul's	—	—	—
St. Mary's	—	—	—
Duddeston and Nechells	—	—	—
St. Bartholomew's	2	98	100
St. Martin's and Deritend.....	—	167	167
Market Hall	—	—	—
Ladywood	—	—	—
TOTALS	2	265	267
MIDDLE RING :			
Lozells	—	—	—
Aston	—	—	—
Washwood Heath	422	—	422
Saltley	10	—	10
Small Heath	5	—	5
Sparkbrook	—	—	—
Balsall Heath	7	—	7
Edgbaston	161	—	161
Rotton Park	9	—	9
All Saints.....	—	—	—
TOTALS	614	—	614
OUTER RING :			
Soho	5	—	5
Sandwell	110	—	110
Handsworth	201	—	201
Perry Barr	2,269	51	2,320
Erdington	46	676	722
Gravelly Hill	18	—	18
Bromford	66	—	66
Stechford	1,138	1,426	2,564
Yardley	509	58	567
Acock's Green	56	—	56
Hall Green	249	—	249
Sparkhill	141	—	141
Moseley and King's Heath	150	439	589
Selly Oak	172	—	172
King's Norton	441	—	441
Northfield	1,036	—	1,036
Harborne	581	88	669
TOTALS	7,188	2,738	9,926
GRAND TOTALS	7,804	3,003	10,807

The following statement shows the number of new houses built in the three groups of wards since 1920 :

<i>Groups of Wards.</i>	<i>No. of Houses Erected.</i>		<i>Total.</i>
	<i>By Private Enterprise.</i>	<i>By Corporation.</i>	
Central Wards	69	678	747
Middle Ring	4,367	5,960	10,327
Outer Ring	50,101	43,706	93,807
TOTALS FOR CITY.....	54,537	50,344	104,881

Number of Dwellings

From a return prepared by the Rates Department of the City Treasurer's Department it appears that on October 1st, 1938, there were 268,608 dwelling-houses, 17,985 shops with dwelling-houses attached, and 2,243 licensed premises, unlicensed hotels and farmhouses in the city. Some idea of the relative size of the dwelling-houses may be gathered from the assessments for rating purposes, which were as follows :

<i>Assessment.</i>	<i>No. of Dwelling Houses.</i>
Up to and including £5	3,835
Over £5 and up to £10	115,289
Over £10 and up to £15	69,081
Over £15 and up to £20	44,536
Over £20 and up to £50	32,448
Over £50 and up to £100	3,119
Over £100.....	300

As at 31st December, 1938, official representations in respect of 10,744 houses had been submitted to the local authority since the passing of the Housing Act, 1930. Of these, 3,430 were in respect of individual houses or blocks of houses not large enough to merit area action, and 7,314 were dealt with as clearance or improvement areas.

Of the 1,586 houses included in clearance areas represented during 1938, 530 were dealt with by way of Clearance Orders, and 1,056 by way of Compulsory Purchase Orders. In the case of Compulsory Purchase Orders it was necessary to effect purchase of added lands in order to enable the cleared areas to be dealt with efficiently ; arising out of Orders made by the local authority during the year, 123 houses fell within this category.

During the year the housing problem as a whole received careful consideration by all committees concerned in any way with housing operations, and in December the City Council approved a five year housing programme providing for the erection of 25,000 houses in five years, as follows :

For slum clearance and overcrowding	20,000
For the needs of registered applicants	5,000

It was decided to proceed with the provision of dwellings by the erection of flats and maisonnettes in central areas and houses on the outskirts, the proportion being :

Flats	7,500
Maisonnettes	7,500
Houses	10,000

The report adopted by the Council dealt fully with the various problems which were likely to be met with in the performance of this programme and referred to the need for co-ordinating the operations of clearance and rehousing, with particular reference to the suitable development of cleared sites in central areas. In order to cope with the extended programme, arrangements were made by the Public Health Department, as well as by other departments, for re-arrangement and suitable augmentation of staff, and steps were taken immediately to complete the detailed survey of the central areas. In order that each individual operation undertaken might bear a proper relation to the housing and town planning development of the city as a whole, suitable machinery was set up whereby each of the departments might have constant knowledge of action taken by all the other departments concerned. In this way it is hoped to secure that the future development of any lands proposed to be cleared will be fully considered by the appropriate committees before any one of the committees concerned reports to the City Council, and the various stages of development will be so unified as to result in the development of the city in accordance with the plans put forward by the City Surveyor covering those portions of the city which are not at present subject to town planning schemes.

Rehousing operations in pursuance of the earlier programme proceeded normally and, except in a few isolated instances, the houses dealt with were vacated without recourse to action in the Courts for possession. Owing to a combination of favourable circumstances, house production

was maintained at such a rate as to cope fully with the demand arising from clearance operations. The three-storey flats sited on the land covered by the Emily Street Housing Compulsory Purchase Order progressed rapidly during the year and should be fully occupied before the end of 1939, the accommodation being sufficient for 247 families.

Most of the clearance areas initiated during the year were in respect of properties situated in a ring from half to one mile from the city centre and lay in districts zoned in some instances for housing purposes and in others for industrial purposes. The City Surveyor carried out, during the year, a survey of all vacant sites in central areas, including those resulting from the operation of Clearance Orders, when it was found that, owing to the small size, high ground value, undesirable situation and irregular shape of most of these sites, there would be no substantial contribution to the housing programme from this source. It is hoped that where areas are to be cleared in districts zoned for housing purposes it will be possible, by the operation of Housing Compulsory Purchase Orders, to have available at an early date sites for the erection of flats or maisonnettes in pursuance of the five year house-building programme mentioned above.

An examination of the various houses comprising the different areas dealt with during the year indicates how serious and extensive the slum clearance problem continues to be within the city. The houses referred to were of a particularly low standard and it would be true to say that there are many other areas comprising houses no better in type. It is hoped, however, that if the new programme is carried into effect the improvement in the housing conditions in the city will come nearer that standard which the City Council would like to see established, particularly when the demolition of unfit houses is related to the erection of dwellings of a vastly higher standard.

Difficulties in connection with the operation of the programme were encountered during the time of national emergency in September, when it was found necessary to postpone a Ministry of Health Inquiry, with the result that at the next Inquiry more than 1,000 houses had to be dealt with. This caused some inconvenience to owners, agents and solicitors as well as to officers of the Corporation, but it is hoped that it will be possible to avoid a recurrence of this difficulty in the future.

A more detailed inspection of the worst of the areas lying within the boundaries of the Duddleston and Nechells Proposed Redevelopment Area was proceeded with and it is expected that substantial operations in this area will enable certain areas to be cleared and available for development early in 1940.

Continued experience of operations under the Housing Act, 1936, did not disclose any unexpected difficulties. During the year undertakings

under Sub-Section 3 of Section 11 were accepted by the local authority in respect of forty-eight houses, whereby the owners themselves undertook reconditioning on lines sufficiently radical to render the resultant houses fit for human habitation ; twenty-four houses were, in fact, rendered fit during the year. In view of frequent assertions that reconditioning on a more extensive scale is desirable, those operations which were carried out during the year were examined and in no case was it found, in respect of houses represented individually under Section 11, that the reconditioning operation had been truly economical. Any minor difficulties which arose in connection with those operations were found to be based on difficulties due to under-estimating on the part of the builders employed by the owners. This under-estimating did not appear to be deliberate, but was due to the impossibility of estimating expenditure in connection with difficulties which could not be discovered until the structures had been interfered with. As an example, may be quoted rotted roof timbers, the extent of the decay not being capable of measurement until the roof covering had been removed.

The displacements effected in connection with slum clearance have had an extensive and beneficial effect on the amount of overcrowding in the city, as many of the houses demolished were, in fact, overcrowded ; though it has to be added that this relief of overcrowding was more than balanced by new cases of overcrowding arising elsewhere (see below). Largely by the operations of the Housing Bureau, it was found possible to effect replacement of persons dispossessed by slum clearance operations in houses in the central areas which had been vacated in connection with the programme for the abatement of overcrowding.

Overcrowding

During the year 51,700 visits were paid with a view to keeping the records of the 1935-36 overcrowding survey up to date. The work was carried out by four temporary inspectors between January and May, when this staff was reduced to three for the summer period. A fourth man was taken on again in November.

Complaints of unrecorded overcrowding are investigated and visits are paid to any persons who state that they are overcrowded and desire other accommodation, or to any house where a birth or death has occurred in a name not recorded in the register.

During the year 6,200 overcrowded families living in non-municipal houses have been referred to the Housing Bureau, which was set up under the control of the Estates Department in November, 1937, to encourage the use of all available housing accommodation in the city. The function of this Bureau is to act as a clearing house by means of which void working

class houses become available for re-lets, so enabling the Estates Department to maintain contact with the owners of, and agents for, such property. It is thus possible, when an overcrowded family living in non-municipal property is provided with adequate accommodation by the local authority, to re-let the house so vacated to another and smaller family which would otherwise require to be provided with a municipal house.

Overcrowding statistics for the year are shown in the accompanying table, Section 4. It will be seen that, although 1,211 cases of overcrowding involving 9,020 persons are known to have been relieved, 1,394 new cases were reported, affecting 8,996 persons, the result being a net increase of 183 overcrowded families. No less than 465 municipal houses became overcrowded during the year through the process of children reaching the age of one or ten years, thus bringing the family above the "permitted number." This was also the usual reason for new overcrowding in non-municipal houses. Sixteen cases are recorded of houses becoming overcrowded in contravention of Section 59 of the Housing Act, 1936, i.e., after the appointed day, and in these cases suitable action was taken against the responsible persons. It was found necessary in two cases only to take legal proceedings in respect of breach of Section 59. Both cases related to overcrowded subtenants living in houses let-in-lodgings and a fine of 40s. was imposed in each case.

A record is maintained of all non-municipal houses from which overcrowded families have been transferred by the local authority and it has been arranged that the necessary visits are paid to such houses in order to prevent a recurrence of overcrowding.

Voluntary decrowding disposed of 448 cases, and 399 families were transferred from overcrowded conditions in one municipal house to adequate accommodation in another. Little real progress, however, was made until the autumn when houses began to become available, but it was estimated towards the end of the year that some 30-40 houses were becoming available weekly for overcrowded families. Although the problem of the very large family totalling eight or more equivalent adults still remains to be catered for, it appears likely that by continuing at the present rate of progress the total number of overcrowded families will be substantially reduced during the coming year.

Action in respect of Individual Dwelling Houses

For detailed information as to the nature of the defects disclosed by inspection reference should be made to page 116. The statement below, set out in the form required by the Ministry of Health, is in respect of the number of houses dealt with under the different statutory provisions relating to dwelling-houses :

1.—INSPECTION OF DWELLING-HOUSES DURING THE YEAR.	
(1) (a) Total number of dwelling-houses inspected for housing defects (under Public Health or Housing Acts)	18,164
(b) Number of inspections made for the purpose....	130,270
(2) (a) Number of dwelling-houses (included under sub-head (1) above) which were inspected and recorded under the Housing Consolidated Regulations, 1925	3,763
(b) Number of inspections made for the purpose....	57,320
(3) Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation.....	2,562
(4) Number of dwelling-houses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation	9,660
2.—REMEDY OF DEFECTS DURING THE YEAR WITHOUT SERVICE OF FORMAL NOTICES.	
Number of defective dwelling-houses rendered fit in consequence of informal action by the Local Authority or their officers.....	6,734
3.—ACTION UNDER STATUTORY POWERS DURING THE YEAR.	
A.—Proceedings under Sections 9, 10 and 16 of the Housing Act, 1936 :	
(1) Number of dwelling-houses in respect of which notices were served requiring repairs.....	1,528
(2) Number of dwelling-houses which were rendered fit after service of formal notices :	
(a) By owners	1,376
(b) By Local Authority in default of owners.....	76
B.—Proceedings under Public Health Acts :	
(1) Number of dwelling-houses in respect of which notices were served requiring defects to be remedied	2,486
(2) Number of dwelling-houses in which defects were remedied after service of formal notices :	
(a) By owners	2,048
(b) By Local Authority in default of owners.....	15
C.—Proceedings under Sections 11 and 13 of the Housing Act, 1936 :	
(1) Number of dwelling-houses in respect of which Demolition Orders were made	347

(2) Number of dwelling-houses demolished in pursuance of Demolition Orders.....	309
(3) Number of dwelling-houses in respect of which official representations were made	545
(4) Number of dwelling-houses in respect of which undertakings under Section 11 (3) were accepted :	
(a) Not to use in future for human habitation	46
(b) To carry out works to render fit for human habitation.....	48
(5) Number of dwelling-houses rendered fit for human habitation in pursuance of undertakings.....	24
D.—Proceedings under Section 12 of the Housing Act, 1936 :	
(1) Number of parts of buildings or underground rooms in respect of which Closing Orders were made	36
(2) Number of parts of buildings or underground rooms in respect of which Closing Orders were determined, the part of building or room having been rendered fit ..	2
(3) Number of parts of buildings or separate tenements in respect of which official representations were made	42
4.—HOUSING ACT, 1936—PART IV : OVERCROWDING.	
A.—(1) Number of houses estimated to be overcrowded at the end of the year 1938	8,784
(2) Number of persons dwelling therein	53,135
B.—(1) Number of new cases of overcrowding reported during the year 1938	1,394
(2) Number of persons concerned in such cases.....	8,996
C.—(1) Number of cases of overcrowding known to have been relieved during the year 1938.....	1,211
(2) Number of persons concerned in such cases.....	9,020
D.—Cases in which dwelling-houses have again become overcrowded after the Local Authority have taken steps for the abatement of overcrowding.....	16
E.—Number of houses voluntarily decrowded during the year 1938	448

Action in respect of Clearance Areas

The following table shows briefly, as at December 31st, 1938, the position with regard to Orders made in respect of clearance areas :

<i>Title of Order.</i>	<i>Date of Representation.</i>	<i>Date of Council Resolution.</i>	<i>Date of Confirmation Order.</i>	<i>Number of Houses.</i>
Queen's Head Road, Handsworth, C.O. . .	5/ 2/37	8/ 6/37	15/ 7/38	8
Herbert Road C.P.O.	5/ 2/37	8/ 6/37	21/ 7/38	77
Herbert Road C.O.	5/ 2/37	8/ 6/37	15/ 7/38	18
Cooksey Road C.O.	5/ 2/37	8/ 6/37	15/ 7/38	24
Green Lane, Small Heath, C.P.O.	5/ 2/37	8/ 6/37	21/ 7/38	4
Talfourd Street C.P.O., No. 1	5/ 2/37	8/ 6/37	21/ 7/38	73
Talfourd Street C.P.O., No. 2	5/ 2/37	8/ 6/37	21/ 7/38	8
Highgate Street C.O.	5/ 2/37	8/ 6/37	15/ 7/38	3
Belgrave Road C.O.	5/ 2/37	8/ 6/37	15/ 7/38	4
Hick Street C.O.	5/ 2/37	8/ 6/37	15/ 7/38	31
Moseley Street C.O.	5/ 2/37	8/ 6/37	15/ 7/38	7
Alcester Street C.O.	5/ 2/37	8/ 6/37	15/ 7/38	18
Parliament Street C.O., No. 1	5/ 2/37	8/ 6/37	15/ 7/38	12
Parliament Street C.O., No. 2	5/ 2/37	8/ 6/37	15/ 7/38	12
Bromford Lane, Erdington, C.O.	12/ 4/37	8/ 6/37	15/ 7/38	13
Wharf Road, King's Norton, C.O., No. 1 . .	12/ 4/37	8/ 6/37	15/ 7/38	2
Wharf Road, King's Norton, C.O., No. 2 . .	12/ 4/37	8/ 6/37	15/ 7/38	7
Wharf Road, King's Norton, C.O., No. 3 . .	12/ 4/37	8/ 6/37	15/ 7/38	4
Wharf Road, King's Norton, C.O., No. 4 . .	12/ 4/37	8/ 6/37	15/ 7/38	2
Masshouse Lane, King's Norton, C.O. . .	12/ 4/37	8/ 6/37	15/ 7/38	20
The Green, King's Norton, C.O., No. 1 . .	12/ 4/37	8/ 6/37	15/ 7/38	4
The Green, King's Norton, C.O., No. 2 . .	12/ 4/37	8/ 6/37	15/ 7/38	6
The Green, King's Norton, C.O., No. 3 . .	12/ 4/37	8/ 6/37	15/ 7/38	2
The Green, King's Norton, C.O., No. 4 . .	12/ 4/37	8/ 6/37	15/ 7/38	20
The Green, King's Norton, C.O., No. 5 . .	12/ 4/37	8/ 6/37	—	10
The Green, King's Norton, C.O., No. 6 . .	12/ 4/37	8/ 6/37	15/ 7/38	3
The Green, King's Norton, C.O., No. 7 . .	12/ 4/37	8/ 6/37	15/ 7/38	3
The Green, King's Norton, C.O., No. 8 . .	12/ 4/37	8/ 6/37	15/ 7/38	9
Park Road, Hockley, C.O.	3/ 5/37	8/ 6/37	15/ 7/38	4
Heneage Street C.O.	12/ 7/37	27/ 7/37	*	18
Queen's Road, Yardley, C.O.	22/ 6/37	9/11/37	*	6
Pool Lane, Yardley, C.O.	22/ 6/37	9/11/37	*	3
Duddeston Row C.O.	5/ 2/37	9/11/37	15/ 7/38	10
Coventry Road C.O.	26/ 2/37	9/11/37	*	8
Mount Pleasant C.P.O.	26/ 2/37	9/11/37	Confirma-	8
Bordesley Park Road C.P.O.	26/ 2/37	9/11/37	tion Orders	106
Miles Street C.P.O., No. 1	26/ 2/37	9/11/37	not	123
Miles Street C.P.O., No. 2	26/ 2/37	9/11/37	received	130
Richard Street C.P.O., No. 1	4/10/37	14/12/37	during 1938	13
Richard Street C.O.	4/10/37	14/12/37	"	13
Richard Street C.P.O., No. 2	4/10/37	14/12/37	"	71
Richard Street C.P.O., No. 3	4/10/37	14/12/37	"	7
Richard Street C.P.O., No. 4	4/10/37	14/12/37	"	31
Lord Street C.P.O., No. 1	4/10/37	14/12/37	"	20

*Property owned by Corporation.

(Table continued on following page)

<i>Title of Order.</i>	<i>Date of Representation.</i>	<i>Date of Council Resolution.</i>	<i>Date of Con- firmation Order.</i>	<i>Number of Houses.</i>
Lord Street C.P.O., No. 2	4/10/37	14/12/37	Confirma- tion Orders not received during 1938	6
Dartmouth Street C.P.O., No. 1	4/10/37	14/12/37		59
Dartmouth Street C.P.O., No. 2	4/10/37	14/12/37		26
Adams Street C.P.O., No. 1	4/10/37	14/12/37		2
Adams Street C.P.O., No. 2	4/10/37	14/12/37	"	2
Great Francis Street C.P.O.	4/10/37	14/12/37		34
Rowland Street C.P.O.	4/10/37	14/12/37		12
Vauxhall Road C.P.O.	4/10/37	14/12/37		7
Lawley Street C.P.O.	4/10/37	14/12/37	"	92
Garland Street C.O., No. 1	11/10/37	1/ 2/38		25
Garland Street C.O., No. 2	11/10/37	1/ 2/38		2
Garrison Lane C.O.	11/10/37	1/ 2/38		3
Garrison Street C.O., No. 1	11/10/37	1/ 2/38	"	35
Garrison Street C.O., No. 2	11/10/37	1/ 2/38		130
Garrison Street C.O., No. 3	11/10/37	1/ 2/38		8
Landor Street C.O., No. 1	11/10/37	1/ 2/38		71
Landor Street C.O., No. 2	11/10/37	1/ 2/38	"	3
Summer Lane C.O., No. 1	10/ 5/37	5/ 4/38		24
Summer Lane C.O., No. 2	10/ 5/37	5/ 4/38		13
Brearley Street C.O., No. 1	10/ 5/37	5/ 4/38		21
Brearley Street C.O., No. 2	10/ 5/37	5/ 4/38	"	4
Hatchett Street C.O., No. 1	10/ 5/37	5/ 4/38		85
Hatchett Street C.O., No. 2	10/ 5/37	5/ 4/38		55
Blews Street C.O., No. 1	10/ 5/37	5/ 4/38		46
Blews Street C.O., No. 2	10/ 5/37	5/ 4/38	"	69
Brewery Street C.O.	10/ 5/37	5/ 4/38		28
Newtown Row C.O.	10/ 5/37	5/ 4/38		45
Lower Tower Street C.O., No. 1	10/ 5/37	5/ 4/38		28
Lower Tower Street C.O., No. 2	10/ 5/37	5/ 4/38	"	19
Frankfort Street C.P.O.	10/ 5/37	5/ 4/38		56
Moseley Street C.O.	11/ 1/38	1/ 2/38		8
New Canal Street C.O., No. 1	22/ 3/38	28/ 6/38	Confirma- tion Orders not received during 1938	7
New Canal Street C.O., No. 2	22/ 3/38	28/ 6/38		6
New Canal Street C.O., No. 3	22/ 3/38	28/ 6/38		6
Fazeley Street C.O.	22/ 3/38	28/ 6/38		36
Erskine Street C.O.	29/ 3/38	28/ 6/38	"	15
Balaclava Road C.P.O.	22/ 2/38	28/ 6/38		12
Villa Street C.P.O.	29/ 3/38	28/ 6/38		19
Bath Street C.O.	2/ 5/38	26/ 7/38		4
Weaman Street C.O., No. 1	2/ 5/38	26/ 7/38	"	4
Weaman Street C.O., No. 2	2/ 5/38	26/ 7/38		2
Weaman Street C.O., No. 3	2/ 5/38	26/ 7/38		2
Slaney Street C.O.	2/ 5/38	26/ 7/38		3
Steelhouse Lane C.O.	2/ 5/38	26/ 7/38	Confirma- tion Orders not received during 1938	4
Sand Street C.O.	2/ 5/38	26/ 7/38		18
Bissell Street C.P.O., No. 1	25/ 1/38	6/12/38		24
Bissell Street C.P.O., No. 2	25/ 1/38	6/12/38		33
Bissell Street C.P.O., No. 3	25/ 1/38	6/12/38	"	8

*Property owned by Corporation.

(Table continued on following page).

<i>Title of Order.</i>	<i>Date of Repre- sentation.</i>	<i>Date of Council Resolution.</i>	<i>Date of Con- firmation Order.</i>	<i>Number of Houses.</i>
Bissell Street C.P.O., No. 4	25/ 1/38	6/12/38	Confirma- tion Orders not received during 1938	11
Bissell Street C.P.O., No. 5	25/ 1/38	6/12/38		13
Barford Street C.P.O., No. 1.....	25/ 1/38	6/12/38		12
Barford Street C.P.O., No. 2.....	25/ 1/38	6/12/38		41
Barford Street C.P.O., No. 3.....	25/ 1/38	6/12/38		73
Macdonald Street C.P.O., No. 1	25/ 1/38	6/12/38		8
Macdonald Street C.P.O., No. 2	25/ 1/38	6/12/38		7
Macdonald Street C.P.O., No. 3	25/ 1/38	6/12/38		2
Macdonald Street C.O.	25/ 1/38	6/12/38		21
Bishop Street C.P.O., No. 1	25/ 1/38	6/12/38		5
Bishop Street C.P.O., No. 2	25/ 1/38	6/12/38	6	
Bishop Street C.P.O., No. 3	25/ 1/38	6/12/38	99	
Sherlock Street C.P.O.	25/ 1/38	6/12/38	5	
Vaughton Street South C.P.O., No. 1 ..	25/ 1/38	6/12/38	7	
Vaughton Street South C.P.O., No. 2 ..	25/ 1/38	6/12/38	2	
Charles Henry Street C.P.O.	25/ 1/38	6/12/38	40	
Cheapside C.O.	24/ 5/38	6/12/38	37	
Green Lane, Small Heath, C.O.	24/ 5/38	6/12/38	16	
Price Street C.O., No. 1	24/ 5/38	6/12/38	47	
Price Street C.O., No. 2	24/ 5/38	6/12/38	4	
Price Street C.O., No. 3	24/ 5/38	6/12/38	14	
Loveday Street C.O.	24/ 5/38	6/12/38	*	3
Hooper Street C.O., No. 1	31/10/38	6/12/38	Confirma- tion Orders not received during 1938	50
Hooper Street C.O., No. 2	31/10/38	6/12/38		16
Dudley Road C.O.	31/10/38	6/12/38		16
Great Francis Street C.P.O., No. 1	5/ 7/38	Not yet	86	
Great Francis Street C.P.O., No. 2	5/ 7/38	made.	131	
Great Francis Street C.P.O., No. 3	5/ 7/38	„	125	
Great Francis Street C.P.O., No. 4	5/ 7/38	„	210	
Milk Street C.O., No. 1	5/ 9/38	„	9	
Milk Street C.O., No. 2	5/ 9/38	„	18	
Coventry Street C.O., No. 1	5/ 9/38	„	28	
Coventry Street C.O., No. 2	5/ 9/38	„	10	
Allison Street C.O.	5/ 9/38	„	13	
River Street C.O., No. 1	5/ 9/38	„	15	
River Street C.O., No. 2	5/ 9/38	„	17	
Floodgate Street C.O.	5/ 9/38	„	49	
Heath Mill Lane C.O.	5/ 9/38	„	32	
New John Street C.P.O., No. 1	14/10/38	„	12	
New John Street C.P.O., No. 2	14/10/38	„	31	
New John Street C.P.O., No. 3	14/10/38	„	11	
New John Street C.P.O., No. 4	14/10/38	„	12	
New John Street C.P.O., No. 5	14/10/38	„	11	
TOTAL DURING 1938 : 61 Areas, 63 Orders.....				1,586
TOTAL TO DECEMBER 31ST, 1937 : 203 Areas, 183 Orders.....				5,579
GRAND TOTAL TO DECEMBER 31ST, 1938 : 264 Areas, 246 Orders..				7,165

*Property owned by Corporation.

SECTION E.

**Inspection and Supervision
of Food**

SECTION E

INSPECTION AND SUPERVISION OF FOOD

Food Premises

As required by Section 72 of the Public Health Act, 1925, the inspection of retail food premises has been continued. Various defects were found and undesirable practices noted, while certain premises had deteriorated below the standard set in the city by reason of their increased trade and consequent overcrowding or for reasons of change of ownership. In general, however, proprietors gave their ready assistance in the removal of nuisance and in the application of suitable remedies.

Forty-four "eating houses" were added to the register required by Section 54 of the Birmingham Corporation (General Powers) Act, 1935, and thirty-five "transfer registrations" were made during the year.

The systematic inspection of all public houses in the city, commenced towards the end of 1937, was virtually completed by the end of 1938. Visits were carried out both during "open" and "closed" hours, and were complementary to the supervision exercised by the Justices. The inspections were made by ten members of the Chief Sanitary Inspector's staff, and comprised visits to 278 premises holding an "off" licence only, and to 999 for which both "on" and "off" licences had been approved.

The investigation brought home the amenities and up-to-date methods adopted in the more modern house, and showed that the trade is alive to modern development and to the requirements of public health practice. In comparing the new with the old for example, there is vast improvement in the layout of buildings, in the ventilation of cellars and public rooms, in the avoidance of spillage, in the material used in construction of pipes, in the cleansing of those pipes, and in the compressed air system of beer delivery. Adverse comments, however, were frequently made with regard to the washing of glasses; while partly due to the inefficiency of employees, this was also due in part to the management, as facilities were in many instances quite inadequate. The collection and disposal of spillage also was generally reported as requiring attention, and it would be desirable to institute some uniform method of cleansing beer pipes.

Much valuable information has been gleaned which should afford a basis for a satisfactory practical standard in the future.

Ice Cream

The registration of premises used for the manufacture and sale of ice cream and of persons trading as manufacturers or vendors of, or merchants or dealers in, this food as required by Section 54 of the Birmingham Corporation Act, 1935, has been maintained. The following table gives

details of the registrations approved during the year, the cancellations from the register and the totals of persons and premises on the register at the end of the year.

Registration of premises for the manufacture of ice cream	76
Registration of premises for the sale of ice cream.....	244
Transfer registration of premises for the manufacture of ice cream.	26
Transfer registration of premises for the sale of ice cream	46
Registration of persons as manufacturers of ice cream.....	17
Registration of persons as vendors of ice cream	69
Transfer registration of persons as manufacturers of ice cream....	—
Transfer registration of persons as vendors of ice cream	—
Total registrations effected	313
Total transfer registrations effected.....	46
Cancellations of registrations of persons and premises for the manufacture of ice cream	189
Cancellations of registrations of persons and premises for the sale of ice cream	239
Total number of persons and premises registered for the manufacture of ice cream	681
Total number of persons and premises registered for the sale of ice cream	1,353

Systematic analyses and bacteriological examinations have been carried out on samples taken from manufacturers and vendors of ice cream, and the results so obtained have been the subject of discussion between members of the trade and inspectors from the Department.

While the majority of persons in the trade have given their co-operation in improvement of premises and in methods of manufacture and storage of ice cream, it is to be regretted that no legal standard exists. Difficulty must inevitably arise where no limit of bact. coli is fixed and where fat content may vary from 0·5 per cent to 20 per cent.

The work of supervision of premises and sampling of ice cream has been in the hands of the Milk and Dairies Inspectors.

Milk and Dairies Administration

The Public Health Committee is responsible for the supervision of all dairy premises and milk shops in the city area and of the conditions under which milk is handled therein. The Markets and Fairs Committee supervise all matters relating to the health of cows and the condition of cowsheds.

During the greater part of the year the Senior Milk and Dairies Inspector has had the assistance of three junior inspectors; their work including supervision of dairy premises and milk shops and the work in relation to ice cream detailed above.

Much work has been carried out in giving practical advice to dairymen on the handling and care of milk and milk products and in planning the reconstruction and improvement of premises.

While it has been known for some time that the sale as milk of a mixture of separated milk and cream was a regular practice with certain dairy-men, and while investigations have been continued, it was near the end of the year before sufficient evidence was obtained to warrant legal proceedings. Two firms were implicated and both were convicted, fines of £5 with costs being imposed, while one firm was also removed for three months from the register of retail purveyors. The chief gain from such a case lies in the publicity, however, and not in the fine imposed, while removal from a register of retail purveyors means little or nothing. Here the offending firm happened to be an off-shoot of a larger parent firm who continued the offender's wholesale trade and transferred his retail trade to other premises in the same ownership. Inability under the existing legislation to restrict also the wholesale trade of an offender in cases of such contraventions can only render the Local Authority ineffective in its attempts to administer the law.

A table setting out the alterations in the register of dairies, etc., during 1938, and a note on the work done by the dairy inspectors follows. It will be observed that the number of wholesale purveyors of milk continues to decrease, fifteen having given up their businesses during the year; and as regards the retail purveyors, sixty have been removed from the register at their own requests for one reason or another. The reduction in the number of shops in which loose milk is sold continues, while the number of shops in which milk is sold in bottles filled and sealed on registered premises has increased by 398. These alterations in the numbers of persons and premises on the register have been due to a variety of causes, which include the increasing demand of the general public for a more efficient service, the policy of the Milk Marketing Board, and the activities of the Board and this Department in requiring a higher standard of efficiency in dairies and milk shops.

MILK AND DAIRIES REGISTER

	1937.	1938.
Number of wholesale purveyors	106	91
Number of retail purveyors	821	761
Number of milkshops	2,568	2,116
Number of bottled milk shops.....	3,476	3,874
Number of bottled milk purveyors.....	41	39
Total number of new registrations issued	687	694
Total number of transfer registrations issued	303	343
Total number of deletions from register	376	825

NUMBER OF VISITS PAID

Milkshops	5,377
Wholesale purveyors	270
Retail purveyors	807
To pasteurising plants	993
Other visits	1
Unsuccessful	399

DEFECTS FOUND

Painting or limewashing milkshop or store required.....	122
Number of premises showing sanitary defects.....	55
Number of premises showing other defects	158
Notices served under Section 92, P.H.A., 1936.....	4

Milk (Special Designations) Order, 1936

Principal licences issued, 1938 :	
Producers of tuberculin tested milk.....	4
Dealers in tuberculin tested milk.....	48
Producers of accredited milk	22
Dealers in accredited milk.....	36
Producers of pasteurised milk	16
Dealers in pasteurised milk	225
Supplementary licences issued, 1938 :	
Dealers in tuberculin tested milk.....	8
Dealers in accredited tested milk.....	8
Dealers in pasteurised tested milk	3
TOTAL	370

As in 1937, forty-two licences to produce designated milk were issued, while 309 principal licences were issued to dealers in designated milk as against 272 in 1937.

Systematic bacteriological examinations of these designated milks and their containers were carried out, 790 samples being taken for this purpose. Relative to the standards laid down in the Order, 30·7 per cent of samples of tuberculin tested milk and 20·7 per cent of samples of accredited milk failed by reason of presence of bact. coli in 1/100th of a millilitre. At the same time 5·1 per cent of samples of tuberculin tested milk and 7·9 per cent of accredited milk failed to pass the methylene blue test, which is a relatively simple though inexact method of determining bacterial contamination. The bacteriological results in respect of accredited milk show an improvement upon the results in 1937.

As regards pasteurised milk, no samples failed to reach the required standard, all containing less than 100,000 bact. coli in 1/100th of a millilitre. In addition, 237 samples of pasteurised milk were submitted to the phosphatase test and of these seventy-three, or 30·8 per cent, failed to pass the test, thus indicating imperfect pasteurisation. This latter figure does not give a true indication of the efficiency with which the process of pasteurisation is carried out in the city because samples were not taken at random. They include tests carried out to assess the efficiency of newly installed plant, and repeated tests of samples produced by dairymen whose samples had failed to pass the phosphatase test.

As in previous years, the bacteriological examination of designated milks produced in Worcestershire and sent into the city for sale was continued at the request of the Council, but the arrangement terminated with the approval of the County Council towards the end of the year.

The Inspection of Cows and Cowsheds within the City Area

Summary of Report by MR. BRENNAN DE VINE, Chief Veterinary Officer.

City Dairies

At the end of 1938 there were sixty dairy farms housing 953 milch cows in 128 registered sheds in the city area.

The Milk and Dairies Order requires the registration of cowkeepers and enforcement of general requirements as to structure and cleanliness of cowsheds, and for this purpose a monthly inspection is made of all city cowsheds; and, in addition, all cows in city dairies are examined. During the year 1,279 visits of inspection were made to cowsheds.

During April visits to city dairies were discontinued owing to an outbreak of foot and mouth disease at the City Abattoir, 3rd April, which caused the city to be included in a scheduled infected area until 25th April.

Dairy Herds

The health and cleanliness of the cows in city dairies were generally good.

Mastitis

During the year there were fifty-seven cases of cows affected with acute catarrhal mastitis, and the milk produced from these cows was prohibited from sale.

Tuberculosis

In addition to the clinical examination of the dairy cows, bulk samples of milk were taken from each city dairy herd during the year ; also individual samples of milk were taken from suspected cows :

	<i>Taken.</i>	<i>Infected.</i>
Mixed samples from dairy herds	93	5
Individual samples	65	9
TOTALS.....	158	14

As a result of clinical examinations and the sampling of milk sixteen cows affected with tuberculosis were removed from city dairy herds during the year and dealt with under the Tuberculosis Order.

In addition, at the request of the Ministry of Agriculture and Fisheries, post-mortem examinations were made on eight cows dealt with under the Tuberculosis Order, and which had been sent to the city meat market from farms outside the city area.

Other Diseases

Twelve cows found to be suffering from specified diseases (other than tuberculosis) were kept under special supervision.

Ministry Inspections

The Ministry of Agriculture and Fisheries is responsible for the quarterly veterinary inspection of dairy herds, for the purposes of Part IV of the Agriculture Act, 1937, which came into force 1st April, 1938, and as they had no whole-time officers appointed for this area, Brennan De Vine, F.R.C.V.S., D.V.S.M. (VICT.), and William White, M.R.C.V.S., were appointed to act as local veterinary inspectors for this purpose, and the fees paid for these inspections are credited to the Public Health Committee.

Certificates have been issued as follows :

<i>Non-designated Herds.</i> 72	<i>Cows examined clinically.</i> 1,081
<i>Accredited Herds.</i> 56	1,319
	<hr/> 2,400

Inspection of Cowsheds

Regular inspection has been maintained of all registered cowsheds, attention being paid to the provisions of the Milk and Dairies Order for securing adequate lighting, ventilation and a clean water supply, also the cleansing of cowsheds and removal of dung and offensive matter.

Section 22 of the Milk and Dairies Order requires that:

“ Every cow-keeper shall cause every part of the interior of every cowshed in his occupation to be thoroughly cleansed from time to time, as often as may be necessary to secure that such cowshed shall be at all times reasonably clean and sweet.”

Every cowshed was properly limewashed or sprayed with lime or otherwise disinfected at least twice during the year.

It was necessary in twenty-four cases specially to request the cleansing of cowsheds and the removal of manure from the immediate precincts of the sheds.

Repairs and structural alterations to cowsheds have either been completed during the year or are still being carried out at twenty-six farms, under our supervision.

A new cowshed at Church Farm, and an additional cowshed at each of three other dairy farms, have been added to the register.

Owing to the extension of housing estates in the city area seventeen farms discontinued keeping cows, the land and buildings having been acquired for building purposes.

Examination of Milk coming into the city from outside sources for the presence of Tubercle Bacilli

Samples of milk are taken from all senders' supplies at least once a year, and during 1938 2,386 samples were taken at various city milk depots from churns arriving from outside sources.

<i>Source.</i>	<i>Bulk Samples.</i>	<i>Result of Exam.</i>		<i>Percentage Infected.</i>
		<i>Free.</i>	<i>Infected.</i>	
Derbyshire	28	24	4	14·3
Gloucestershire	94	91	3	3·2
Herefordshire	23	23	—	—
Leicestershire	103	89	14	13·6
Montgomeryshire	1	1	—	—
Northamptonshire	2	2	—	—
Oxfordshire	1	1	—	—
Shropshire	184	164	20	10·9
Staffordshire	854	768	86	10·1
Warwickshire	856	789	67	7·8
Worcestershire	234	220	14	6·0
	2,380	2,172	208	—
Pasteurised	6	6	—	—
TOTAL	2,386	2,178	208	8·7

Note.—The six samples of pasteurised milk were taken for the purpose of checking the efficient working of the pasteurisation plant at various depots.

Milk and Dairies (Consolidation) Act, 1915

In connection with the ascertainment of the source of supply of milk, the consumption of which is likely to cause tuberculosis, notification under Section 4 of this Act was sent in 208 cases to the Medical Officer of Health of the county or county borough in which the cows yielding the milk were kept. It is the duty of the County Medical Officer of Health to arrange for the inspection of cattle in dairies, in respect of which notice is given that milk supplied therefrom has been found to contain living tubercle bacilli.

Notifications received from outside authorities

(1) Notification was received from the Medical Officer of Health for the Urban District of Solihull :

That a sample of milk supplied by a city dairyman had been found to contain living tubercle bacilli. An inspection was made of the herd and two individual and one bulk samples of milk were taken, all of which proved to be "free." One cow, which was in milk at the time the infected sample was taken in Solihull, was slaughtered at the City Meat Market, 20th October, and found to be affected with tuberculosis.

(2) Notification was received from the Medical Officer of Health for Smethwick:

That samples of milk which originated from a city dairy farm had been found to be infected. This farm was already under investigation and one cow had been removed from the herd and disposed of under the Tuberculosis Order.

Comparative Return

The following table shows the number of samples of milk sent in from outside sources taken during the past ten years and the percentage infected :

<i>Year.</i>	<i>Samples Taken.</i>	<i>Samples Infected.</i>	<i>Percentage Infected.</i>
1929	958	64	6·7
1930	1699	105	6·2
1931	1657	133	8·0
1932	1086	97	8·9
1933	1694	108	6·4
1934	1699	109	6·4
1935	1668	134	8·0
1936	1648	166	10·1
1937	2267	232	10·2
1938	2386	208	8·7
Average for Period			7·9

SUMMARY OF SAMPLES OF MILK TAKEN DURING 1938

	<i>No. Taken.</i>	<i>No. Infected.</i>
<i>From Outside Dairies :</i>		
Pasteurised	6	—
Tuberculin Tested, Accredited, and Non-Designated	2,380	208
<i>From City Dairies :</i>		
Mixed samples	93	5
Individual samples	65	9
TOTAL	2,544	222

Tuberculin testing of City Dairy Herds and of Herds belonging to Corporation Institutions

Five herds, comprising 373 animals, were being tested by the department at 31st December last, as follows :

	<i>Approx. No. in Herd.</i>	<i>Breeding Herd.</i>	<i>Mixed Herd.</i>
1 ..	99	—	1
2 ..	139	1	—
3 ..	51	—	1
4 ..	46	—	1
5 ..	38	—	1
	373	1	4

Herds tested during 1938

The testing of herds is carried out half-yearly, and the following return gives the number of animals tested during the year:

	<i>Tested.</i>	<i>Passed.</i>	<i>Failed.</i>	<i>Commencement of testing.</i>
1	219	203	16	3rd October, 1908.
2	262	256	6	3rd October, 1908.
3	96	92	4	1st January, 1934.
4	110	86	24	14th October, 1936.
5	94	66	28	9th August, 1938.
6	60	44	16	Discontinued.
7	6	6	—	Discontinued.
8	2	2	—	Discontinued.
	849	755=87·6%	94=12·4%	
During 1937 .. }	1,222	1147=93·9%	75=6·1%	

Meat and Food Inspectors

For the purposes of the inspection of meat and other foods the city is divided into six districts for shop and private slaughterhouse inspection, with an inspector in charge of each district.

The bacon factories and slaughterhouses in the centre of the city are regularly visited by two veterinary inspectors.

The inspection of foodstuffs in the wholesale fruit, vegetable and fish markets is carried out by an inspector who is solely employed in these markets.

At the public abattoir the inspection staff consists of four veterinary inspectors and six meat inspectors.

In addition to animals being slaughtered at the public abattoir, animals are regularly slaughtered in eighty-five private slaughterhouses in the city area. Of these eighty-five slaughterhouses forty-eight are registered and thirty-seven are annually licensed.

Twenty-five of the private slaughterhouses are used for the slaughter of pigs only, seventeen for cattle and sheep only, and the other forty-three for the slaughter of all animals for food.

During the year there has been a change of occupancy in four of the private slaughterhouses, as follows:

110, Hockley Hill	Registered slaughterhouse.
70, Lozells Road	Registered slaughterhouse.
High Street, Aston	Registered slaughterhouse.
345, Stratford Road	Registered slaughterhouse.

There are also two annually licensed knackeries in the city.

Returns of Animals Slaughtered

RETURN OF ANIMALS SLAUGHTERED IN THE PUBLIC SLAUGHTERHOUSES

PUBLIC ABATTOIR, SHERLOCK STREET				
<i>Beasts.</i>	<i>Calves.</i>	<i>Sheep and Lambs.</i>	<i>Pigs.</i>	<i>Total.</i>
40,194	75,766	284,525	66,029	466,514
PUBLIC SLAUGHTERHOUSE, MONTAGUE STREET				
<i>Beasts.</i>	<i>Calves.</i>	<i>Sheep and Lambs.</i>	<i>Pigs.</i>	<i>Total.</i>
5	12	10	4,544	4,571

RETURN OF ANIMALS SLAUGHTERED IN PRIVATE SLAUGHTER- HOUSES

<i>District.</i>	<i>Beasts.</i>	<i>Calves.</i>	<i>Sheep.</i>	<i>Pigs.</i>	<i>Total.</i>
Central	1,011	12	7,139	246,178	254,340
No. 1.—Harborne and Winson Green ..	663	94	7,637	716	9,110
No. 2.—Aston and Perry Barr	1,487	886	10,365	8,652	21,390
No. 3.—Saltley and Erdington	1,379	228	10,973	2,217	14,797
No. 4.—Small Heath and Yardley	892	693	7,985	2,098	11,668
No. 5.—Balsall Heath and King's Heath	1,227	293	8,259	1,266	11,045
No. 6.—Selly Oak and Northfield	304	129	3,330	285	4,048
TOTAL	6,963	2,335	55,688	261,412	326,398

TOTAL SLAUGHTERED IN CITY

	<i>Beasts.</i>	<i>Calves.</i>	<i>Sheep and Lambs.</i>	<i>Pigs.</i>	<i>Total.</i>
1937.....	54,603	82,789	281,227	341,720	760,339
1938.....	47,162	78,113	340,223	331,985	797,483

These returns show that the average numbers of animals killed per week during 1938 were as follows :

	<i>Beasts.</i>	<i>Calves.</i>	<i>Sheep.</i>	<i>Pigs.</i>	<i>Total.</i>
Public Abattoir, Sherlock Street	773	1,457	5,472	1,270	8,972
Public Slaughterhouse, Montague Street	—	—	—	87	87
Private Slaughterhouses	134	45	1,071	5,027	6,277
TOTAL	907	1,502	6,543	6,384	15,336

Meat Sold in the City

The following return shows the approximate amount and percentage of home killed and imported meat, other than pork and bacon, sold in the city during the year :

	<i>Home Killed Tons.</i>	<i>Imported Tons.</i>	<i>Total Tons.</i>
Beef and Veal	15,271	15,705	30,976
Mutton	6,379	13,427	19,806
	21,650	29,132	50,782
	<i>Percentage of Total.</i>		
	<i>Home Killed.</i>	<i>Imported.</i>	
Beef and Veal	49·3	50·7	
Mutton	32·2	67·8	
	42·6	57·4	

In 1928 the returns showed 45·9 per cent imported and 54·1 per cent home killed; the proportion of imported meat has increased from 45·9 per cent to 57·4 per cent, and the home killed has decreased from 54·1 per cent to 42·6 per cent, during the last ten years.

Montague Street Live Pig Market

The Pig Market at Montague Street is divided into two sections: one section for home bred pigs and the other for imported pigs. During the year 127,896 pigs were booked through the home market, and 39,981 pigs through the imported section, making a total of 167,877.

In connection with Montague Street premises there is a public pig slaughtering hall. During the year 4,544 pigs were slaughtered there.

In addition to those pigs which are booked through Montague Street Market, 19,502 Irish pigs were received direct to private slaughterhouses in the city.

Wholesale Fruit, Vegetable and Fish Markets

In connection with the food inspection in these markets during the year 1938 unusually heavy condemnations of poultry were experienced. The majority of the condemnations were due to the poultry being found affected with tuberculosis.

The Ministry of Health notified us that heavy condemnations of poultry affected with tuberculosis were found in the London wholesale markets.

As many of the affected poultry found in Birmingham were received from Ireland, we notified the Commissioner for Trade for Eire, York House, London, of the high percentage of Irish birds being condemned.

As a result of those representations the class of poultry received from Ireland toward the end of the year was much improved.

Shell Fish

Origin of Mussels and Oysters exposed for sale in Birmingham

Mussels were received from the following places:

Aber.	Kidwelly.
Aberdovey.	King's Lynn.
Barmouth.	Lytham.
Carlingford Lough.	Omeath.
Castlemaine Harbour.	Oranmore Bay.
Conway.	Wells-next-the-Sea.
Holyhead.	White Abbey.

Oysters were received from:

Falmouth.	Truro.
Liverpool.	Whitstable.
London.	

Samples of Mussels and Oysters

During the year fifty-one samples of mussels were collected and sent for bacteriological examination, and of these fourteen samples were found to be below the standard of cleanliness required.

In addition sixteen samples of oysters were collected and one of these, on bacteriological examination, was found to be below the standard of cleanliness required.

In the case of the above unsatisfactory samples, notice was given under the Public Health (Shell-fish) Regulations, 1935, to the following local authorities: Aber, Conway, Truro, and Wells-next-the-Sea; and notices were also sent to the Eire authorities in respect of mussels from Castlemaine Harbour, Oranmore Bay, Omeath, and White Abbey.

It is customary in Birmingham and district to sell by retail mussels and oysters in the raw state, and cockles and periwinkles in a cooked state.

Castlemaine Harbour Order

Under powers contained in the Birmingham Corporation Act, 1935, an Order was made prohibiting the sale in Birmingham of shellfish taken from Coppeen and Lack beds in Castlemaine Harbour.

Food Inspection in the City Area outside the Wholesale Markets

In connection with twenty-two bacon factories in the city, two veterinary inspectors are daily employed carrying out post-mortem inspections, and, in addition, six food inspectors are employed visiting slaughterhouses, food preparation premises and shops.

Registered Premises used for the Manufacture of Cooked and Potted Meats

There are 176 food preparation premises on the register as follows:

Cooked Meats, etc., Manufacturers.....	108
Sausage and Pork Pie Manufacturers.....	66
Jam Manufacturers	2
TOTAL	176

Retail Butchers' Shops, etc.

Beef and Pork Butchers	1,177
Grocers	1,385
Greengrocers	1,438
Hucksters	4,987
Fish Friers	602
Fishmongers.....	672
TOTAL	10,261

The following is the number of visits paid by the Inspectors :

Slaughterhouses	10,122
Food Preparation Premises	8,173
Fish Friers	4,563
Beef and Pork Butchers	32,081
Grocers	2,887
Greengrocers and Fishmongers	20,663
Hucksters.....	1,421
Ham and Bacon Curers	5,177
Street Hawkers	23,600
Cold Stores	21,172
Institutions, Schools, etc.	85
TOTAL	129,944

Prosecutions

Legal proceedings were taken in one case under the Public Health Act in respect of diseased meat being sold and sent into the city. This meat was seized, the defendant prosecuted and fined £5.

Private Slaughterhouses (and Montague Street)

CARCASES INSPECTED AND CONDEMNED

	<i>Cattle.</i>	<i>Calves.</i>	<i>Sheep and Lambs.</i>	<i>Pigs.</i>
Number killed	6,968	2,347	55,698	265,956
Number inspected	Approx. 10%	Approx. 10%	Approx. 10%	Approx. 20%
<i>All Diseases except Tuberculosis :</i>				
Whole carcasses condemned	2	3	17	70
Carcases of which some part or organ was condemned.....	108	—	28	191
Percentage of the number killed affected with disease other than tuberculosis	1.6	0.1	0.1	0.1
<i>Tuberculosis only :</i>				
Whole carcasses condemned	2	—	—	95
Carcases of which some part or organ was condemned.....	93	—	—	22,826
Percentage of the number killed affected with tuberculosis	1.4	—	—	8.6
TOTAL DISEASED	3.0%	0.1%	0.1%	8.7%

City Meat Market

CARCASES INSPECTED AND CONDEMNED

	<i>Cattle.</i>	<i>Calves.</i>	<i>Sheep and Lambs.</i>	<i>Pigs.</i>
Number killed	40,194	75,766	284,525	66,029
Number inspected	40,194	75,766	Approx. 10%	66,029
<i>All Diseases except Tuberculosis :</i>				
Whole carcases condemned	231	341	1,688	374
Carcases of which some part or organ was condemned.....	7,754	59	1,854	2,184
Percentage of the number killed affected with disease other than tuberculosis	19.9	0.5	1.2	3.9
<i>Tuberculosis only :</i>				
Whole carcases condemned	353	55	—	124
Carcases of which some part or organ was condemned.....	9,330	41	—	6,333
Percentage of the number killed affected with tuberculosis	24.1	0.1	—	9.8
TOTAL DISEASED	44%	0.6%	1.2%	13.7%

Foods judged as Unfit

<i>No. of Surrenders.</i>	<i>Class of Foodstuffs.</i>	<i>Tons.</i>	<i>Cwts.</i>	<i>Qrs.</i>	<i>Lbs.</i>
13,931	Meat	602	17	2	13
583	Fish	68	4	2	9
1,443	Poultry, game, etc....	31	2	3	5
1,018	Fruit and vegetables ..	500	14	—	4
192	Miscellaneous	4	17	—	25
17,167	..... TOTALS	1,207	16	1	—

All the unfit meat, fish, poultry and other foodstuffs are sent to the Salvage Department, Montague Street Depot.

Residual Value

Compensation at the rate of £3 per ton is paid to the owners of carcases and parts of carcases surrendered as unfit for human food, and also in respect of the carcases of pigs which died during transit.

During the year £1,557 13s. 6d. was paid in respect of the following carcasses, etc.:

	<i>Tons.</i>	<i>Cwts.</i>	<i>Qrs.</i>
Beef	255	11	3
Veal	7	16	—
Mutton	26	19	1
Pork	228	17	2
TOTALS	519	4	2

Miscellaneous

Partially Hatched and Addled Eggs.

We received notice from a neighbouring local authority that they suspected partially hatched and addled eggs were being sent to Birmingham to be used for food material. We traced two cases of these which were seized and destroyed.

Diseases of Animals Acts

Anthrax

Twelve suspected cases in cattle and one in sheep were reported. In each case a microscopic examination was made of the blood but no case of anthrax was discovered.

Foot and Mouth Disease

During the year there were 190 outbreaks in various parts of the country, and 23,777 animals were slaughtered. In several cases in-contact animals had been brought to Birmingham, but these we were able to trace and place under detention.

On Sunday, 3rd April, notification was received that foot and mouth disease had been confirmed among cattle at Wilford, near Nottingham, and that four in-contact cattle had been sent to the Birmingham Abattoir, 31st March. These four in-contact cattle were found with fifteen other cattle in the new lairs at the City Meat Market, and eight of the nineteen animals showed symptoms of foot and mouth disease.

The affected animals were valued and arrangements were made for the immediate slaughter of the nineteen cattle, and the eight infected carcasses were sent to Montague Street for destruction. The lairs were cleansed and disinfected and all animals in the abattoir and lairs were slaughtered by next day. No other cases of foot and mouth disease were detected.

As a result of this outbreak Birmingham was declared an infected area and the usual restrictions were imposed on the movement of animals, which require that animals can only be moved on licence.

The city was freed from restrictions on 25th April.

Swine Fever

During the year sixty-nine cases of suspected swine fever were investigated and post-mortem examinations made.

In nine of these cases symptoms of swine fever were detected and reported to the Ministry of Agriculture and Fisheries; five of the cases were confirmed.

Under the Regulation of Movement of Swine Order of 1922 we examined during the year 5,686 store pigs which were brought into the city under licence.

Bovine Tuberculosis

Fifteen cases of tuberculosis, coming within the conditions of the Tuberculosis Order, 1938, were dealt with during the year.

In addition, at the request of the Ministry of Agriculture and Fisheries, post-mortem examinations were made on eight cows dealt with under the Tuberculosis Order, and which had been sent to the abattoir from farms outside the city area.

SECTION F

Prevalence of, and Control
over, Infectious and other
Diseases

SECTION F

PREVALENCE OF, AND CONTROL OVER, INFECTIOUS AND OTHER DISEASES

GENERAL

The mortality figures for 1938 are compared with the decennial averages in the statement below :

<i>Disease.</i>	<i>Deaths in 1938.</i>	<i>Average 1928-1937.</i>	<i>Above or below the average.</i>
Enteric fever	0	3	- 3
Small-pox	0	0	—
Measles	10	79	- 69
Scarlet fever	7	12	- 5
Whooping cough	75	97	- 22
Diphtheria	69	68	+ 1
Pulmonary tuberculosis	732	825	- 93
Other forms of tuberculosis	82	107	- 25
Influenza	162	331	- 169

The prevalence of the notifiable diseases is shown in the next table :

<i>Disease.</i>	<i>Cases in 1938.</i>	<i>Average 1928-1937.</i>	<i>Above or below the average.</i>
Enteric fever	11	37	- 26
Small-pox	0	6	- 6
Scarlet fever	2,046	2,779	- 733
Diphtheria	1,056	1,172	- 116
Erysipelas	586	558	+ 28
Puerperal pyrexia	408	258	+ 150
Ophthalmia neonatorum	1,106	575	+ 531
Pulmonary tuberculosis	1,011	1,192	- 181
Other forms of tuberculosis	198	225	- 27
Acute primary or influenzal pneumonia ..	2,246	2,557	- 311
Cerebro-spinal fever	55	23	+ 32
Acute poliomyelitis	14	8	+ 6
Polioencephalitis	2	1	+ 1
Encephalitis lethargica	14	23	- 9
Malaria	7	5	+ 2
Dysentery	97	25	+ 72
Continued fever	0	0	—

The diphtheria cases did not reach the average by 116, those of scarlet fever were below the average by 733. As indicated by the number of deaths in relation to this incidence scarlet fever was mild and diphtheria relatively severe in type.

The action taken with regard to puerperal fever, puerperal pyrexia and ophthalmia neonatorum is recorded in the Maternity and Child Welfare Section of this report. The continued increase in notifications of ophthalmia neonatorum is significant only of greater freedom in notifying many cases which are not severe and are not gonococcal in origin. The increase in notification of puerperal pyrexia appears similarly to be due to closer attention among midwives and practitioners to rises of temperature previously failing to obtain notification.

The following cases were reported through the head teachers of elementary schools and the attendance officers :

	1938.	1937.	1936.	1935.
Measles	2,011	7,321	6,079	8,765
German measles	442	127	332	5,192
Whooping cough	4,632	1,816	6,120	3,375
Chicken pox	4,110	5,217	6,230	5,584
Mumps	2,441	1,131	11,186	1,945

The cases were visited by health visitors and steps taken to exclude contacts from school where necessary.

Enteric Fever

During the year 18 cases were notified, but further investigation revealed the fact that 7 of these were not suffering from the disease. Of the remaining 11 cases 3 were contracted outside the city. The remaining 8 Birmingham cases are tabulated as follows :

Typhoid fever	4
Paratyphoid B.....	4

No deaths occurred from typhoid fever. Of the four cases of Paratyphoid B, all were sporadic, while amongst the four typhoid fever cases three were sporadic and one secondary to one of the cases contracted outside the city. The incidence of and mortality from typhoid fever establish a new low record for the city.

		<i>No. of Cases.</i>	<i>Case rate per 1,000.</i>	<i>No. of deaths registered.</i>	<i>Death-rate per 1,000.</i>
1901- 5	(average)	544	·70	91	·12
1906-10	„	242	·30	51	·06
1911-15	„	90	·11	22	·03
1916-20	„	22	·02	5	·01
1921-25	„	30	·03	4	·00
1926-30	„	41	·04	5	·00
1931-35	„	42	·04	2	·00
1928	.....	20	·02	3	·00
1929	.....	31	·03	4	·00
1930	.....	62	·06	9	·01
1931	.....	54	·05	1	·00
1932	.....	58	·06	2	·00
1933	.....	30	·03	1	·00
1934	.....	40	·04	6	·01
1935	.....	28	·03	2	·00
1936	.....	28	·03	2	·00
1937	.....	17	·02	1	·00
1938	.....	11	·01	0	—

Undulant Fever

No cases of undulant fever came to the notice of the Department during the year.

Glandular Fever

No cases of this disease came to the notice of the Department during the year 1938.

Small-pox

No cases of small-pox occurred in the city during the year.

Vaccination

The administration of the Vaccination Acts is carried out by the Public Health Committee.

Following are tabulated statistics relating to this work for the current year, together with similar figures relating to each year since 1930. It will be seen that the percentage of successful vaccinations has risen slightly above the figures for 1937, 1936 and 1935, though lower than that for previous years, while the slight increase of conscientious objectors experienced during recent years continued in 1938. Coupled with this latter fact, however, it has to be remembered that only four cases of small-pox have occurred in the city since the considerable outbreak experienced in 1928 ; so that there has been no strong incentive to have vaccination performed where parents are otherwise hesitant.

VACCINATION.

	1938.	1937.	1936.	1935.	1934.	1933.	1932.	1931.	1930.
Births Returned	17543	17040	16501	16340	15703	17063	17832	17866	17590
Conscientious objectors per cent	31·8	31·2	31·0	30·6	29·5	28·0	28·0	26·8	25·2
Died unvaccinated	889	865	920	856	823	830	958	841	900
Successful vaccinations (per cent of survivors)	52·6	51·9	51·7	50·8	53·1	55·4	54·8	54·3	53·7
Insusceptible (per cent of survivors)	0·6	0·3	0·5	0·4	0·5	0·9	1·0	1·1	1·2
Postponed by medical certificate (per cent. of survivors)	0·3	0·3	0·5	0·3	0·5	0·4	0·4	0·5	0·6
Removed (per cent of survivors)	3·9	3·8	3·4	4·9	4·1	3·8	3·5	4·5	5·1
Lost sight of (per cent of survivors)	3·2	3·5	3·0	2·6	2·6	2·6	2·7	2·3	2·4
Still under notice (per cent of survivors) ..	5·9	7·3	8·1	8·7	8·0	7·6	7·9	9·2	10·5

Measles

Cases notified to the Department through the schools have been systematically visited by health visitors, and advice as to nursing and general hygiene given where required.

During the year 134 cases were admitted to Little Bromwich Hospital for treatment.

Since the third quarter of 1930 immunisation methods have been applied to the attenuation of infection or the prevention of the disease. The blood serum of a person who has previously suffered from measles, when given intramuscularly to contacts in suitable amount, and at a suitable stage in the incubation period, will either prevent the disease occurring or so modify it as to make the attack a mild one.

Supplies of such serum are being obtained by the generous co-operation of the Birmingham Blood Transfusion Service, whose members have kindly come forward to act as donors.

This serum is given to selected children under five years of age who have been in contact with measles and who are either also acutely ill with some other disease or in a state of chronic ill-health. In most of the cases the aim is not to prevent infection, but to *attenuate* it, thus obtaining life-long immunity without grave disturbance of health. Apart from cases referred by health visitors and general practitioners for such immunisation, some of the voluntary hospitals requested help with a view of preventing further cases occurring in their wards where there were children suffering

from acute illnesses. Immunisation has been carried out on 183 children during the year with satisfactory results. The inoculations were for prevention in 48 cases and for attenuation in 135.

There were 10 deaths registered from the disease during the year.

The number of cases in past years, together with the mortality rate, are set out in the following table :

	<i>No. of Cases.*</i>	<i>No. of Deaths.</i>	<i>Death rate per 1,000 of population</i>
1901- 5 (average) ..	?	279	·36
1906-10 " ..	?	294	·36
1911-15 " ..	6,027	419	·48
	(1912-1915)		
1916-20 " ..	10,773	168	·18
1921-25 " ..	6,831	121	·13
1926-30 " ..	7,464	100	·10
1931-35 " ..	7,504	76	·08
1928	5,030	41	·04
1929	9,764	196	·20
1930	6,512	58	·06
1931	9,745	177	·18
1932	5,033	52	·05
1933	9,011	77	·08
1934	4,967	23	·02
1935	8,765	52	·05
1936	6,079	39	·04
1937	7,321	73	·07
1938	2,011	10	·01

*Partial notification only through schools, except for the years 1916-19.

From the following table it is evident that the death-rate from measles in the Central Wards is far in excess of that for the Middle or the Outer Ring of Wards, owing to the course of the disease and the liability to contract complications being directly influenced by overcrowding and insanitary conditions.

MEASLES DEATH-RATE PER 1000

	1935.	1936.	1937.	1938.
Central Wards	·11	·06	·19	·02
Middle Ring	·03	·02	·04	·01
Outer Ring	·04	·03	·04	·01

The age-distribution of the fatal cases of measles was as follows :

	1935.	1936.	1937.	1938.
Under 1 year	11	8	17	5
1 and under 2 years	22	14	31	3
2 and under 5 years	13	12	18	—
5 years and over	6	5	7	2
TOTALS.....	52	39	73	10

Scarlet Fever

The total number of notifications received during the year for this disease was 2,116. Of these, 1,015 were treated in hospital and the remainder, 1,101, were treated at home.

After revision of diagnosis the total number of true cases of scarlet fever treated in hospital was 953, and those at home 1,093. Several cases admitted as diphtheria proved to be suffering from scarlet fever.

In addition, there were 29 cases treated in the City Hospital on behalf of other authorities.

The death-rate of .01 per 1,000 for 1938 is about the same as the average death-rate for this disease for the past ten years.

SCARLET FEVER CASES AND DEATHS

	<i>No. of Cases.</i>	<i>Case-rate per 1,000 population.</i>	<i>No. of Deaths.</i>	<i>Death-rate per 1,000 population.</i>	<i>Case Mortality per cent.</i>
1901-05 (average)	4,038	5.21	172	.22	4.26
1906-10 ,,	3,956	4.83	116	.14	2.93
1911-15 ,,	5,456	6.29	125	.14	2.29
1916-20 ,,	2,472	2.73	41	.04	1.66
1921-25 ,,	2,652	2.84	32	.03	1.21
1926-30 ,,	1,910	1.96	9	.01	0.47
1931-35 ,,	2,966	2.90	14	.01	0.47
1928.....	1,521	1.56	5	.01	0.33
1929.....	2,413	2.46	9	.01	0.37
1930.....	2,397	2.44	15	.02	0.63
1931.....	2,761	2.73	10	.01	0.36
1932.....	2,544	2.50	12	.01	0.47
1933.....	2,639	2.58	20	.02	0.76
1934.....	3,297	3.21	15	.01	0.45
1935.....	3,591	3.48	12	.01	0.33
1936.....	3,981	3.84	10	.01	0.25
1937.....	2,644	2.53	9	.01	0.34
1938.....	2,046	1.95	7	.01	0.34

The report on cases treated at the Infectious Diseases Hospital will be found on page 185.

Whooping Cough

Whooping cough caused 75 deaths during 1938. The following table gives the number of cases and deaths in previous years, and it will be seen that both the number of known cases and the death-rate were at a much higher level than in 1937.

	<i>No. of Cases.*</i>	<i>No. of Deaths.</i>	<i>Death-rate per 1,000 population.</i>
1901- 5 (average)	?	316	·41
1906-10 "	?	294	·36
1911-15 "	3,264 (1912-1915)	213	·25
1916-20 "	3,592	206	·23
1921-25 "	4,463	180	·19
1926-30 "	4,443	119	·12
1931-35 "	4,130	87	·08
1928	6,463	163	·17
1929	3,347	123	·13
1930	5,012	110	·11
1931	3,990	89	·09
1932	5,248	131	·13
1933	2,143	35	·03
1934	5,896	115	·11
1935	3,375	66	·06
1936	6,120	107	·10
1937	1,816	28	·03
1938	4,632	75	·07

*Partial notification through schools.

The ages at death were as follows :

	1933.	1934.	1935.	1936.	1937.	1938.
Under 1 year	14	52	26	66	15	52
1 and under 2 years	13	37	14	20	6	17
2 and under 5 years	6	24	24	19	4	5
Over 5 years	2	2	2	2	3	1
TOTALS	35	115	66	107	28	75

Thus 69 out of the 75 deaths occurred among children under two years of age.

Every case of whooping cough reported to the Department is visited, and advice given on hygienic measures. Where appropriate the services of a district nurse are supplied under an arrangement made with the District Nursing Association.

Diphtheria

The total number of cases notified was 1,722. Of these 1,675 were removed to the City Fever Hospital, the remainder (47) being nursed at home.

Revision of diagnosis took place in 669 of the hospital cases and one home case, while four cases sent in as scarlet fever proved to be suffering from diphtheria.

After correction, the net number of cases of definite diphtheria belonging to the city was 1,056, of whom 1,010 were treated in hospital and 46 at home.

In addition, there were 43 cases treated in the City Hospital on behalf of other authorities.

DIPHTHERIA CASES AND DEATHS

	<i>Cases of Clinical Diphtheria.</i>	<i>Case-rate per 1000 of Population.</i>	<i>Deaths.</i>	<i>Death-rate per 1000 of Population.</i>	<i>Case Mortality per cent.</i>
1901-05 (average)	991	1.28	159	.20	16.0
1906-10 „	1,210	1.48	149	.18	12.3
1911-15 „	1,125	1.30	155	.18	13.8
1916-20 „	1,065	1.19	143	.16	13.4
1921-25 „	1,651	1.76	109	.12	6.6
1926-30 „	1,642	1.69	84	.09	5.1
1931-35 „	871	0.85	60	.06	6.9
1928.....	1,552	1.59	70	.07	4.5
1929.....	1,611	1.64	86	.09	5.3
1930.....	1,701	1.73	88	.09	5.2
1931.....	1,171	1.16	62	.06	5.3
1932.....	620	0.61	35	.03	5.6
1933.....	417	0.41	33	.03	7.9
1934.....	1,019	0.99	84	.08	8.2
1935.....	1,129	1.09	84	.08	7.4
1936.....	1,142	1.10	63	.06	5.5
1937.....	1,359	1.30	80	.08	5.9
1938.....	1,056	1.01	69	.07	6.5

The distribution over the City is indicated in the table below, which shows that the cases were more prevalent in the Central Wards than in the Middle and Outer Rings.

<i>Central Wards.</i>	<i>Middle Ring.</i>	<i>Outer Ring.</i>
St. Paul's..... 1·58	Lozells 1·09	Soho..... 0·60
St. Mary's 1·09	Aston 0·64	Sandwell 0·54
Duddeston and	Washwood Heath 0·40	Handsworth 0·53
Nechells 1·72	Saltley 0·72	Perry Barr 1·13
St. Bartholomew's 0·95	Small Heath 0·98	Erdington 0·76
St. Martin's and	Sparkbrook 0·60	Gravelly Hill 0·91
Deritend 1·28	Balsall Heath .. 1·08	Bromford 1·40
Market Hall 0·85	Edgbaston 0·87	Stechford..... 1·15
Ladywood 2·05	Rotton Park 1·53	Yardley 1·84
	All Saints' 1·55	Acocks Green 0·59
		Hall Green 0·96
		Sparkhill 0·47
		Moseley and King's
		Heath 0·78
		Selly Oak..... 0·67
		King's Norton .. 0·48
		Northfield 0·80
		Harborne..... 0·79
Average 1·39	Average 0·94	Average 0·87
		Whole City..... 1·01

A report on the cases treated at the Infectious Diseases Hospital will be found on page 185.

DIPHTHERIA ANTI-TOXIN

Diphtheria anti-toxin is distributed free of charge to medical practitioners for the treatment of their patients, and can be obtained from the Public Health Department, the Bacteriological Laboratory, and eighteen police stations.

IMMUNISATION AGAINST DIPHTHERIA.

17,874 children were immunised by medical officers of the Department during 1938, and a further 1,575 by general practitioners with material supplied free of charge by the Department. Details are given below:

TABLE I

	<i>Immunised (full course)</i>	<i>Incomplete.</i>
Infant Welfare Centres	9,040	870
Council House Clinics	1,183	64
Day Schools and Special Schools	7,290	333
Residential Institutions and Residential Schools.....	361	10
Number done by General Practitioners.....	1,575	—
TOTAL	19,449	—

The total number of pre-school children immunised in 1938 was 10,229.

In addition immunisation material was supplied for hospital staff, a Home Office School, and for 555 occupants of homes for mentally defective adolescents.

The agent used was toxoid antitoxin mixture, in three 1 cc. doses at fortnightly intervals.

By the end of the year approximately 123,000 children had received a full course of protective inoculations since the scheme was started in 1925.

Of this total, 118 children have contracted diphtheria, most of the cases have been mild in type, and no death has occurred.

The following table shows the occurrence of diphtheria in inoculated children classified according to the year of inoculation. There have been no cases in inoculated children after they have reached fifteen years of age.

TABLE II

<i>Year.</i>	<i>Approximate number of children (0-15 years) inoculated during year stated.</i>	<i>Cases of diphtheria among them up-to-date, classified according to year of inoculation.</i>	<i>Deaths from diphtheria among them up-to-date.</i>
1925....	500	0	0
1926....	1,500	2	0
1927....	3,000	4	0
1928....	2,600	1	0
1929....	3,760	6	0
1930....	4,196	5	0
1931....	7,171	14	0
1932....	11,595	11	0
1933....	12,799	18	0
1934....	9,457	18	0
1935....	12,884	15	0
1936....	15,491	19	0
1937....	18,612	3	0
1938....	19,449	2	0
TOTAL ..	123,014	118	0

The records of children immunised while under school age have always been classified in age groups, but it has only recently been possible to do this for school children. Now, however, a scrutiny of all the records has been made in order to ascertain the proportion of the child population under fifteen years immunised by the end of 1938 and the figures are given in the next table. Children fifteen years of age and over by 1938 have been omitted and no correction has been made for deaths or migrations.

TABLE III—DIPHTHERIA IMMUNISATION: NUMBER OF IMMUNISED STILL UNDER 15 YEARS OF AGE DECEMBER, 1938.

1938.		1937.		1936.		1935.		1934.		1933.		1932.		1931.		1930.		1929.		<i>Total</i> 1929-1938	
Age.	No.	Age.	No.	Age.	No.	Age.	No.	Age.	No.	Age.	No.	Age.	No.	Age.	No.	Age.	No.	Age.	No.	Age.	No.
14	67	13	39	12	89	11	190	10	530	9	1,797	8	1,659	7	910	6	506	5	346	14	6,133
13	74	12	97	11	82	10	555	9	752	8	1,868	7	1,583	6	866	5	384	4	137	13	6,398
12	132	11	123	10	118	9	807	8	840	7	2,059	6	1,520	5	796	4	151	3	123	12	6,669
11	151	10	204	9	189	8	983	7	1,021	6	2,307	5	1,257	4	115	3	154	2	120	11	6,501
10	222	9	193	8	311	7	1,198	6	1,654	5	1,981	4	88	3	105	2	124	1	126	10	6,002
9	294	8	353	7	1,976	6	1,774	5	1,616	4	196	3	67	2	93	1	117	under	1	9	6,557
8	506	7	1,925	6	2,869	5	1,758	4	608	3	206	2	99	1	113	under	57	—	—	8	8,141
7	1,889	6	2,656	5	2,723	4	943	3	529	2	229	1	119	1	62	—	—	—	—	7	9,150
6	2,424	5	3,434	4	1,227	3	813	2	530	1	250	under	66	—	—	—	—	—	—	6	8,744
5	3,217	4	1,826	3	981	2	792	1	711	under	1	—	—	—	—	—	—	—	—	5	7,606
4	1,714	3	1,208	2	961	1	1,357	under	541	—	—	—	—	—	—	—	—	—	—	4	5,781
3	1,276	2	1,400	1	1,813	1	911	—	—	—	—	—	—	—	—	—	—	—	—	3	5,400
2	1,567	1	2,209	under	1,538	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	5,314
1	2,796	under	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	5,099
under	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	under	2,951
1	2,951	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	2,951

TOTAL UNDER 15 YEARS OF AGE....96,446

In addition there are approximately 300 whose ages are unknown.

The population under fifteen years at the end of 1938 was estimated at 233,400, so we know that approximately 42 per cent of these children have been immunised.

In addition, there are children who have been treated by their family doctors with material not supplied by the Department, children coming to live in the city who have been immunised elsewhere and children who have been protected by an incomplete course of injections.

It is therefore probable that in the neighbourhood of 45 per cent of Birmingham children are protected from diphtheria.

As far as the pre-school group is concerned we know that of the children visited from the Department 32·6 per cent of those between eight months and five years have been immunised.

It will be necessary to increase this percentage considerably before any clear evidence follows of a definite and persisting control of diphtheria.

A full-sized cinema film was produced in 1938, and thanks to the generous co-operation of cinema directors and managers it had been exhibited at eighteen cinemas by the end of the year.

It has now (May, 1939) been exhibited at a further forty-nine cinemas. In most cases it has been shown in every programme for a week, in all except two without any charge, and even in those two for only a nominal fee.

This valuable contribution by the cinema trade to the dissemination of information about the prevention of diphtheria has been much appreciated by the Public Health Committee.

A 16 mm. copy has been shown extensively at welfare centres, factories, etc.

That it is essential to spread the knowledge and importance of immunisation among parents is obvious when comparisons are made of the deaths from diphtheria with other causes of death in children. In the five years 1934-1938 the deaths of children under fifteen years from diphtheria were 215 in excess of fatal road accidents at those ages ; and of the total deaths in children from 2-5 years of age, diphtheria caused 13·2 per cent.

Dysentery

One hundred and five cases were notified during the year, but on investigation eight of these proved not to be dysentery. Of the ninety-seven true cases seventy were due to B. Sonne, fourteen to B. Flexner, and one amœbic. Two deaths occurred, one from Sonne and one from amœbic dysentery. The incidence is substantially higher than in recent years—as has been the corresponding incidence in many other areas—but the cases have been distributed over the whole city and were not traceable to any specific single source.

No bacteriological examination was made in twelve instances.

Malaria

Seven cases of malaria were reported during the year, and in all cases infection had been contracted abroad. There were no deaths.

Food Poisoning

Cases of food poisoning became compulsorily notifiable in January, 1936, and during the year under review 291 such cases were notified to the Department. The vast majority were of a trivial nature not calling for any specific action by the Public Health Department. In regard to the few remaining cases the necessary action of tracing the infected food stuff, etc., was carried out.

No deaths from food poisoning occurred during 1938.

Acute Anterior Poliomyelitis

Eighteen cases of this disease were notified, but four of these proved not to be anterior poliomyelitis.

POLIOMYELITIS.

<i>Year.</i>	<i>Cases Notified.</i>	<i>Died.</i>	<i>Complete Recovery.</i>	<i>Some Paralysis.</i>
1917 ..	11	2	6	3
1918 ..	4	—	2	2
1919 ..	14	1	6	7
1920 ..	1	—	—	—
1921 ..	11	4	1	6
1922 ..	6	—	1	5
1923 ..	33	3	1	29
1924 ..	39	5	5	29
1925 ..	11	3	5	3
1926 ..	38	3	3	32
1927 ..	15	1	6	8
1928 ..	6	1	1	4
1929 ..	6	—	1	5
1930 ..	9	1	3	5
1931 ..	3	—	1	2
1932 ..	17	6	2	9
1933 ..	10	3	1	6
1934 ..	5	—	3	2
1935 ..	9†	—	2	5
1936 ..	11	2	1	8
1937 ..	1	—	—	1
1938 ..	14	1	3	10

†Two left district.

Polioencephalitis

Two cases of this disease were notified during the year, and both proved fatal.

Encephalitis Lethargica

During the year 14 true cases of this disease came to light in the city, 13 proving fatal. The years of onset were as follows :

1918	1	1928.....	1
1922	1	1929.....	1
1923	2	1932.....	1
1924	3	1938.....	1
1927	2	Unknown	1

The cases notified and deaths recorded in previous years have been as follows :

<i>Year.</i>	<i>Cases.</i>	<i>Deaths.</i>	<i>Year.</i>	<i>Cases.</i>	<i>Deaths.</i>
1919....	11	5	1929....	27	20
1920....	18	7	1930....	10	7
1921....	25	8	1931....	18	12
1922....	12	4	1932....	23	19
1923....	29	12	1933....	25	21
1924....	282	44	1934....	12	9
1925....	92	32	1935....	28	26
1926....	89	36	1936....	23	21
1927....	53	32	1937....	19	21
1928....	41	22	1938....	14	13

Cerebro-spinal Fever

Fifty-six cases were notified as cerebro-spinal meningitis during the year. Of these 54 were confirmed bacteriologically. In two cases the diagnosis was afterwards revised. Of the 55 actual cases 19 succumbed to the attack, giving a case mortality rate of 35 per cent. Also one case notified in 1937 died during the year. One case reported as anterior poliomyelitis was revised to cerebro-spinal fever, making a total of 55 cases of cerebro-spinal fever during 1938. This has been the highest incidence recorded over a considerable period of years.

<i>Age Distribution.</i>	<i>Cases.</i>
Under 1 year	15
1 and under 2 years	9
2 " 5 "	10
5 " 10 "	3
10 " 15 "	1
15 " 20 "	3
20 " 25 "	5
25 " 34 "	4
35 " 44 "	1
45 years upwards	4

The cases and deaths in previous years have been as follows :

<i>Year.</i>	<i>Cases Notified.</i>	<i>Deaths.</i>	<i>Year.</i>	<i>Cases Notified.</i>	<i>Deaths.</i>
1920....	25	18	1930....	14	14
1921....	9	7	1931....	25	21
1922....	18	16	1932....	31	22
1923....	4	2	1933....	26	20
1924....	11	8	1934....	24	20
1925....	7	6	1935....	17	15
1926....	10	9	1936....	38	23
1927....	12	10	1937....	27	16
1928....	12	9	1938....	55	20
1929....	15	15			

REPORT ON THE CITY INFECTIOUS DISEASES HOSPITALS FOR THE YEAR 1938

By DR. F. L. KER, *Deputy Medical Superintendent*

PREFACE

Little Bromwich

The hospital contains at present 592 beds. It consists of twenty-four wards, built at different periods. Wards 3-7, with an isolation block—14, were built forty years ago. Wards 1-3, with another isolation block—15, were built thirty years ago. These are all single-storey wards—recently modernised. Three double-decker blocks, Wards 8-13, and two single-storey cubicle blocks—16 and 17—were erected about twelve years ago. The ground floor wards in the double-storey blocks are used as bed isolation wards: they have verandahs. Other three double-storey blocks, Wards 18-23, and an additional single-storey cubicle block—24, were opened about three years ago: the ground floor wards in these double-storey blocks also have verandahs.

The hospital has recently built nurses' and maids' homes and a fine new general kitchen.

At present 156 beds are being added, all in cubicles (three double-storey blocks and one single-storey ward), while the laundry, mortuary, etc., are being rebuilt.

Witton Hospital

This hospital for small-pox consists of three wards each containing twenty beds. One of the wards is a permanent building and the other two are semi-permanent. There is also accommodation for medical and nursing staff.

During the year 3,636 patients were admitted to the wards, compared with 4,366 during 1937; 4,540 during 1936; and 4,410 during 1935. The figure 3,636 includes seventy-three from outside the city, viz., forty cases of diphtheria, twenty cases of scarlet fever, and thirteen miscellaneous cases.

The following tables give the number of cases of the most important infectious diseases and miscellaneous cases notified during the year and admitted to the hospital, and also the numbers who were discharged or died, as well as the numbers remaining in hospital at the end of the year.

The figures in these tables have not been corrected as regards their true diagnosis. The revised diagnosis will be found under the report of the different diseases later in the report.

It will be noticed that there is a considerable drop in the number of total admissions (3,636 as compared with 4,366). There was a decrease in the notified cases of diphtheria, scarlet fever and also the miscellaneous group, the diphtheria dropping from 2,049 to 1,718 ; the scarlet fever from 1,223 to 1,044, and the miscellaneous group from 1,094 to 874. The miscellaneous group included 133 cases of erysipelas ; 357 cases of whooping cough ; and 134 cases of measles.

The reduction in the number of admissions is due to the fact that during the latter part of the year the incidence of the infectious diseases was abnormally low. The numbers for the first six months of the year showed a slight increase on the corresponding period of the previous year as regards the diphtheria and scarlet fever admissions, and a slight decrease in the miscellaneous group admissions.

STATISTICS

Little Bromwich

(a) DIPHTHERIA. (*Uncorrected for Diagnosis*)

In Hospital on December 31st, 1937.....	370
Admitted during 1938	1,718
Discharged during 1938	1,850
Died during 1938	69
Remaining on December 31st, 1938	169

(b) SCARLET FEVER (*Uncorrected for diagnosis*)

In Hospital on December 31st, 1937.....	109
Admitted during 1938	1,044
Discharged during 1938	1,071
Died during 1938	4
Remaining on December 31st, 1938	78

(c) MISCELLANEOUS (*Uncorrected for diagnosis*)

In Hospital on December 31st, 1937.....	56
Admitted during 1938	874
Discharged during 1938	803
Died during 1938	76
Remaining on December 31st, 1938	51

(d) MISCELLANEOUS (*Uncorrected for diagnosis*)

Chicken-pox	85
Dysentery	22
Encephalitis	1
Enteric fever	11
Erysipelas	133
Measles	134
Meningitis	9
Miscellaneous observations	50
Mumps	35
Pemphigus	3
Pneumonia	2
Rubella	28
Vincent's angina	4
Whooping cough	357
TOTAL	874

Scarlet Fever

1,044 patients were admitted during the year with a notified diagnosis of scarlet fever; of these 104 cases were finally diagnosed as suffering from other complaints as follows:

Tonsillitis	33
No evidence of any disease	20
Erythema	14
Rubella	9
Measles	6
Otorrhœa	5
Food rash	2
Gingivitis	2
Common cold	2
Tonsillar diphtheria	1
Nasal diphtheria	1
Mumps	1
Cerebro-spinal meningitis	1
Chicken-pox	1
Urticaria	1
Quinsy	1
Drug rash	1
Psoriasis	1
Eczema	1
Exfoliative dermatitis	1
TOTAL	104

Actually 982 cases of true scarlet fever were treated in the wards during the year, of whom thirty-four were notified as diphtheria, five as measles, one as rubella, one as mumps and one admitted for observation. Seventeen patients had concurrent infections as follows:

Scarlet fever and concurrent chicken-pox	7
Scarlet fever and concurrent diphtheria	2
Scarlet fever and concurrent whooping cough	3
Scarlet fever and concurrent mumps.....	2
Scarlet fever and concurrent rubella.....	1
Scarlet fever and concurrent measles	1
Scarlet fever and concurrent erysipelas	1
TOTAL	17

The type of scarlet fever continues to be mild, but there were :

Septic cases	10
Sub-septic cases	3
Toxic cases	4
TOTAL	17

The number of deaths attributed to scarlet fever was four, giving a hospital mortality of 0·41 per cent.

Details of the fatal cases were as follow :

	<i>Age in years.</i>	<i>Cause of death.</i>
1	41	Septic scarlet fever : infarcts of lung.
2	6	Septic scarlet fever.
3	2	Toxic scarlet fever : broncho-pneumonia.
4	7	Septic scarlet fever : mastoidectomy : meningitis.

The principal complications are divided into groups according to treatment.

	No Serum.	Serum.	Chemo- therapy (sulpha- nilamide deriva- tives)	Chemo- therapy and serum.	Total.	Per cent. of total cases.
Cases treated	512	334	100	36	982	—
<i>Complications :</i>						
Arthritis	4	8	2	—	14	1·43
Nephritis	11	4	2	2	19	1·93
Otitis	27	23	17	9	76	7·74
Mastoid	1	3	1	3	8	0·81
Late albuminuria . .	3	5	1	—	9	0·92
Late adenitis	80	72	34	13	199	20·26
Tonsillitis	4	7	3	—	14	1·43
Relapse	1	3	—	1	5	0·51
Rhinitis	10	6	6	3	25	2·53
Myocarditis	1	—	—	—	1	0·10
Endocarditis	3	5	1	2	11	1·12
Pericarditis	—	—	—	1	1	0·10
Bronchitis	3	—	4	2	9	0·92
Broncho-pneumonia	—	2	—	—	2	0·20
Meningitis	—	—	—	1	1	0·10
Cellulitis	—	1	—	—	1	0·10
Jaundice	1	—	1	—	2	0·20
TOTALS	149	139	72	37	397	40·40
No. of cases in which complications occurred	119	99	42	21	281	28·61

The cases in which serum or chemotherapy was employed were more severe on admission, while the cases which received both serum and chemotherapy were the most severe.

<i>Reactions following serum.</i>	<i>Per cent of serum treated.</i>
Urticaria..... 107	28·92
Arthritis 6	1·62

TABLE SHOWING AGE AND SEX OF SCARLET FEVER CASES

<i>Age Group.</i>	0-5	5-10	10-15	15-25	25-45	Over 45	<i>Totals.</i>
Recovered :							
Males	136	181	61	28	18	—	424
Females	144	212	95	63	37	3	554
Died :							
Males	1	—	—	—	—	—	1
Females	—	2	—	—	1	—	3
TOTALS	281	395	156	91	56	3	982

Hospital Mortality, 0·41 per cent.

Diphtheria

1,718 patients were admitted to the hospital with a notified diagnosis of diphtheria. Of these, 699 required revision of diagnosis and sixteen were found to be suffering from diphtheria concurrently with another disease. Actually 1,022 true cases of diphtheria were treated in the wards during the year, including two notified as suffering from scarlet fever and one as whooping cough.

Concurrent infections occurred as follow :

Diphtheria concurrent scarlet fever	10
Diphtheria concurrent whooping cough	3
Diphtheria concurrent rubella.....	1
Diphtheria concurrent chicken-pox	1
Diphtheria concurrent mumps.....	1
TOTAL	16

Revised diagnosis of 699 patients notified as diphtheria :

Tonsillitis	287
Carrier	135
Tonsillitis and carrier	77
No evidence of any disease.....	57
Laryngitis.....	47
Scarlet fever	34
Quinsy	14
Rhinitis.....	11
Stomatitis.....	8
Otorrhœa	5
Bronchitis.....	4
Vincent's angina	3
Chicken-pox	3
Measles	2
Erysipelas.....	2
Lobar pneumonia	2
Whooping cough.....	1
Cancer of throat	1
Retropharyngeal abscess	1
Abscess of neck	1
Syphilitic angina	1
Broncho-pneumonia	1
Tuberculous meningitis	1
Enteritis	1
TOTAL	699

Two deaths occurred in the above revised cases, one from lobar pneumonia and one from tuberculous meningitis.

TABLE SHOWING TYPES OF DIPHTHERIA AND MORTALITY

<i>Type.</i>	<i>Total.</i>	<i>Died.</i>	<i>Mortality.</i>
Faucial	741	18	2·43%
Faucial and nasal	148	33	22·30%
Nasal	74	1	1·35%
Faucial and laryngeal.....	34	10	29·41%
Laryngeal	15	2	13·33%
Faucial, nasal and laryngeal.....	4	1	25·00%
Wound	2	—	—
Nasal and laryngeal	1	—	—
Aural	1	—	—
Faucial and conjunctival	1	—	—
Genital	1	—	—
	1,022	65	6·36%

The one death classified as dying from nasal diphtheria was only fourteen days old and was suffering from inanition and died within twenty-four hours of admission.

Twenty-two patients died within forty-eight hours of admission to hospital and of these sixteen died within twenty-four hours of admission. Altogether sixty-five patients died from diphtheria during the year, representing a hospital mortality of 6·36 per cent, in comparison with 5·34 per cent in 1937 and 5·56 per cent in 1936. During the spring months there was a very severe type of diphtheria prevalent which caused many deaths.

TABLE SHOWING MORTALITY IN DIPHTHERIA ACCORDING TO DAY OF DISEASE ON WHICH SERUM WAS FIRST ADMINISTERED

<i>Day of disease on which serum was first given.</i>	<i>Total.</i>	<i>Died.</i>	<i>Mortality.</i>
First	54	2	3·70%
Second	195	10	5·13%
Third	236	25	10·59%
Fourth	168	6	3·56%
Fifth	115	8	6·96%
Sixth day and later	174	12	6·90%
Prophylactic dose later than fifth day....	66	—	—
No serum	14	2*	14·29%
TOTALS	1,022	65	6·35%

*Died before serum could be administered.

The two deaths classified as having serum on the first day of disease were due in one case to laryngeal obstruction and in the other to diphtheria and tuberculous spine.

Analysis of the causes of death in sixty-five cases in which diphtheria was either the cause of death or a contributory cause.

Circulatory collapse	48
Laryngeal obstruction with cardiac failure.....	10
Late respiratory paralysis	2
Diphtheria and tuberculous spine	1
Nasal diphtheria and inanition	1
Diphtheria and empyema	1
Diphtheria and broncho-pneumonia	1
Diphtheria and bronchiectasis.....	1
TOTAL	65

Post-diphtheritic paralyses occurred as follows :

	<i>Recovered.</i>	<i>Died.</i>
Palatal.....	155	3
Strabismus	17	—
Ciliary	12	—
Facial	16	—
Ptosis	3	—
Pharyngeal	16	3
Lower Limbs	46	—
Upper Limbs	2	—
Neck	33	2
Diaphragmatic	2	3
TOTALS	302	11

The 302 paralyses noted above occurred in 180 patients, all of whom recovered, giving a paralysis rate of 17·61 per cent, as compared with 12·72 per cent in 1937 and 10·55 per cent in 1936.

The eleven paralyses occurred in five fatal cases.

Laryngeal Diphtheria

Fifty-four cases of diphtheria had some laryngeal involvement and of these twenty-three required operative interference for the relief of obstruction. In nine cases intubation alone was successful in relieving the obstruction, while two required a subsequent tracheotomy. One of the latter was later re-intubated successfully in order to remove a retained tracheotomy tube. Two cases were relieved by a tracheotomy without a previous intubation, but one of these died five weeks later from circulatory collapse.

The remaining ten cases died. Five obtained no relief from either intubation or tracheotomy and died within twelve hours of admission to hospital. Three obtained temporary relief from intubation, but again obstructed and were not relieved by tracheotomy. Two were admitted with a tracheotomy already performed but both died within twenty-four hours of admission.

In addition one case of streptococcal laryngitis was relieved by tracheotomy.

REACTIONS FOLLOWING SERUM

<i>Amount of serum administered.</i>	<i>0-8000 units</i>	<i>9000 or more I.M.</i>	<i>I.V. or I.M.+ I.V.</i>	<i>Totals.</i>
Numbers	622	130	256	1,008
Urticaria	8	12	35	55
	1·29%	9·23%	13·67%	5·46%

TABLE SHOWING AGE AND SEX OF DIPHTHERIA PATIENTS

<i>Age Group.</i>	0-5	5-10	10-15	15-25	25-45	Over 45	<i>Totals.</i>
Recovered :							
Males	113	185	84	37	19	1	439
Females	97	213	107	63	34	4	518
Died :							
Males	11	9	3	2	1	—	26
Females	10	17	6	4	1	1	39
TOTALS	231	424	200	106	55	6	1,022

Hospital Mortality 6·35 per cent.

Measles

In all, 134 patients were admitted with a notified diagnosis of measles, and of these forty-two required revision of diagnosis, as follows :

Erythema	5
No evidence of infectious disease	9
Miscellaneous	5
Scarlet fever.....	5
Rubella	16
Bronchitis.....	1
Whooping cough.....	1
TOTAL	42

The miscellaneous group consists of one case of broncho-pneumonia, three cases of otitis media, and one case of lobar pneumonia. The case of lobar pneumonia died.

Actually 106 cases of measles were treated in the hospital including :

Notified as scarlet fever	6
Notified as rubella	2
Notified as diphtheria.....	2
Notified as whooping cough	1
Notified as chicken-pox.....	1
Notified as meningitis	1
Admitted for observation	1
TOTAL	14

One case of concurrent infection occurred, namely, chicken-pox.

The principal complications were as follow :

<i>Onset.</i>	<i>In patients who recovered.</i>	<i>In patients who died.</i>
Broncho-pneumonia on admission	9	3
Broncho-pneumonia after admission	4	1
Otitis media on admission	3	—
Otitis media after admission	3	—
Paralytic ileus and suppression of urine	—	1
TOTALS	19	5

Five deaths occurred in the cases of measles, the causes of death being :

Broncho-pneumonia	4
Paralytic ileus and suppression of urine	1
TOTAL	5

TABLE SHOWING AGE AND SEX OF MEASLES PATIENTS

<i>Age Group.</i>	0-1	1-2	2-3	3-4	4-5	5-10	10-20	<i>Over 20</i>	<i>Totals.</i>
Recovered :									
Males ..	5	8	6	7	2	15	5	5	53
Females .	3	5	5	6	3	18	4	4	48
Died :									
Males ..	1	1	1	—	—	—	—	—	3
Females .	—	1	—	—	—	1	—	—	2
TOTALS	9	15	12	13	5	34	9	9	106

Hospital Mortality, 4.71 per cent.

Whooping Cough

In all 357 patients were admitted with a notified diagnosis of whooping cough, and of these forty-three required revision of diagnosis as follows:

No evidence of any disease.....	29
Bronchitis.....	5
Broncho-pneumonia	5
Measles	1
Appendicitis	1
Laryngitis	1
Laryngeal diphtheria	1
TOTAL	43

Actually, 316 true cases of whooping cough were treated in the wards, including :

Notified as diphtheria	1
Notified as measles	1

One case of concurrent infection occurred, namely, rubella.

The principal complications were as follows :

<i>Onset.</i>	<i>In patients who recovered.</i>	<i>In patients who died.</i>
Broncho-pneumonia present on admission	18	21
Broncho-pneumonia developed after admission....	26	12
Bronchitis present on admission	21	2
Bronchitis developed after admission	40	—
Otorrhœa present on admission	13	—
Otorrhœa developed after admission	20	—
Enteritis present on admission	2	1
Enteritis developed after admission	16	9
Marasmus	4	3
Convulsions.....	2	2
Empyema on admission	2	—
Acute mastoiditis on admission.....	2	—
TOTALS	166	50

Of the 316 patients found to be suffering from whooping cough seventy-seven were complicated by pneumonia and of these thirty-three died. In thirty-nine cases pneumonia was present on admission to hospital and in thirty-eight cases pneumonia developed whilst the patients were under treatment.

Fifty-one deaths occurred amongst the whooping cough patients, the cause of death being :

Whooping cough and broncho-pneumonia	33
Whooping cough and marasmus.....	3
Whooping cough and bronchitis.....	2
Whooping cough and enteritis	10
Whooping cough and convulsions	2
Whooping cough and persistent vomiting.....	1
TOTAL	51

TABLE SHOWING AGE AND SEX OF WHOOPING COUGH PATIENTS

Age Group.	0-1	1-2	2-3	3-4	4-5	5-10	10-20	Over 20	Totals.
Recovered :									
Males	29	46	24	5	6	11	—	—	121
Females . .	32	36	24	18	10	24	—	—	144
Died :									
Males	20	2	1	—	1	—	—	—	24
Females . .	15	9	—	1	2	—	—	—	27
TOTALS..	96	93	49	24	19	35	—	—	316

Hospital Mortality, 16·13 per cent.

Erysipelas

In all 133 patients were admitted with a notified diagnosis of erysipelas, and of these sixteen required revision of diagnosis as follows :

No evidence of disease	6
Abscesses	2
Dermatitis	2
Erythema nodosum	1
Phymosis	1
Cellulitis	3
Carcinoma of breast	1
TOTAL	16

The patient having carcinoma of the breast died. Actually 120 cases of erysipelas were treated in the wards including:

Notified as diphtheria	2
Notified as chicken-pox	1
	3

One patient had concurrent scarlet fever.

The site of erysipelas was as follows :

Face	89
Face and scalp	8
Face and neck	2
Limbs	18
Wounds (mastoid)	1
Generalised	2
TOTAL	120

The principal complications occurred as follow :

<i>Complications.</i>	<i>In patients who recovered.</i>	<i>In patients who died.</i>
Cellulitis of scalp	1	—
Abscesses.....	7	—
Enteritis	—	1
Broncho-pneumonia	—	1
Relapse	5	—
TOTALS	13	2

Eight deaths occurred in erysipelas patients, the cause being as follows:

1	Female, æt 24	Facial erysipelas and septicæmia.
2	Female, æt 27	Generalised erysipelas.
3	Male, æt 72	Erysipelas of hand and arm and pulmonary œdema.
4	Male, æt 48	Erysipelas of face and head.
5	Male, æt 6	Facial erysipelas.
6	Female, æt 6 weeks..	Facial erysipelas and enteritis.
7	Female, æt 40	Facial erysipelas.
8	Male, æt 62	Facial erysipelas and broncho-pneumonia.

Sixteen patients were treated with serum, eighty-two with drugs of the prontosil group, and twenty-two with a combination of both.

TABLE SHOWING AGE AND SEX OF ERYSIPELAS PATIENTS

<i>Age Group.</i>	0-5	5-10	10-15	15-25	25-45	Over 45	Totals
Recovered :							
Males	5	2	4	6	15	10	42
Females	10	2	1	11	24	22	70
Died :							
Males	—	1	—	—	—	3	4
Females	1	—	—	1	2	—	4
TOTALS	16	5	5	18	41	35	120

Hospital mortality, 6·66 per cent.

Chicken-pox

Eighty-five cases were admitted with a notified diagnosis of chicken-pox, and of these twelve required revision of diagnosis as follow:

Impetigo	3
Scabies	3
Erysipelas	1
Measles	1
Pemphigus	1
Psoriasis	1
No evidence of disease	2
TOTAL	12

Actually seventy-seven cases of chicken-pox were treated in the wards, including:

Notified as diphtheria	3
Notified as scarlet fever	1
TOTAL	4

Concurrent infections occurred as follow:

Concurrent measles.....	1
Concurrent whooping cough	1
Concurrent nasal diphtheria	1
Concurrent faucial and laryngeal diphtheria....	1
TOTAL	4

One case was admitted with a diagnosis of tuberculous meningitis with concurrent chicken-pox. This case died and was the only death in the chicken-pox cases.

Dysentery and Diarrhoea

Twenty two cases were admitted with a diagnosis of dysentery, and of these eleven required revision of diagnosis as follow :

Enteritis	1
Appendix abscess	1
No evidence of disease	9
TOTAL	11

One case notified as cerebro-spinal meningitis was found to be suffering from dysentery. Of the twelve cases finally diagnosed as dysentery, seven had B. Sonne as the causative organism, four B. Flexner and one B. Morgan No. 1. All the cases recovered.

Mumps

Thirty-five cases were notified as suffering from mumps and of these four required revision of diagnosis as follow:

Adenitis.....	2
Scarlet fever.....	1
Erythema nodosum	1
TOTAL	4

Actually thirty-two cases of mumps were treated in the hospital, one being admitted as scarlet fever and later revised to mumps.

All the cases recovered.

Enteric Fever

Eleven cases were admitted with a notified diagnosis of enteric fever, and of these five required revision of diagnosis as follow:

No evidence of disease	3
Colitis	1
Streptococcal septicæmia	1
TOTAL	5

In the six cases diagnosed as enteric fever the causative organism was B. typhosus in four cases and paratyphosus B. in two.

All the cases recovered.

Pemphigus

Three cases were admitted with a notified diagnosis of pemphigus. One required revision of diagnosis as follows:

No evidence of disease1

Actually three cases were treated in the wards, one being notified as chicken-pox.

All three cases recovered.

Pneumonia

Two cases were admitted with a notified diagnosis of pneumonia, one being revised to acute bronchitis.

The case of pneumonia died.

Vincent's Angina

Four cases were admitted with a notified diagnosis of Vincent's Angina, and all required revision of diagnosis as follow:

Glossitis.....	1
Stomatitis	3
TOTAL	4

Actually three cases of Vincent's Angina were treated in the wards, all being notified as diphtheria.

All cases recovered.

Encephalitis

One case was admitted with a notified diagnosis of encephalitis. This diagnosis was revised to tubercular meningitis.

The case died.

Miscellaneous Observations

Fifty cases were admitted for observation, nine were found to be suffering from infectious diseases, and are included under these respective diseases, namely, two meningitis, one scarlet fever, five anterior poliomyelitis and one measles. The diagnoses in the remaining forty-one cases were as follow:

No evidence of disease	16
Tonsillitis	8
Otitis media	1
Abscess of arm	3
Scabies	3
Miscellaneous	10
TOTAL	41

The miscellaneous group consists of one case each of pleurisy, cellulitis, synovitis, sub-acute appendicitis, bronchitis, osteomyelitis, pyelitis, enteritis, dermatitis and lobar pneumonia.

Cerebro-Spinal Meningitis

Nine cases were admitted with a notified diagnosis of cerebro-spinal meningitis.

Seven required revision of diagnosis as follow:

Pneumococcal meningitis (died)	1
No evidence of disease	3
Lobar pneumonia (died)	1
Measles	1
Dysentery	1
TOTAL	7

Five cases of cerebro-spinal meningitis were treated in the wards, one being admitted with a notified diagnosis of scarlet fever and two being admitted for observation.

All the five cases recovered.

Anterior Poliomyelitis

Five cases admitted for observation were later diagnosed as anterior poliomyelitis. Three cases died and two recovered.

Rubella

Twenty-eight cases were admitted with a notified diagnosis of rubella and ten required revision of diagnosis as follow:

Measles	2
Erythema	2
Scarlet fever	1
Domestic rash	1
No evidence of disease	4
TOTAL	10

Actually forty-three cases of rubella were treated in the wards, sixteen being notified as measles and nine as scarlet fever.

SUMMARY OF MISCELLANEOUS DISEASES

<i>Disease.</i>	<i>No. of cases notified</i>	<i>Diagnosis revised.</i>	<i>Notified as another disease.</i>	<i>Actual No. of cases.</i>	<i>Died.</i>	<i>Case Mortality.</i>
Measles	134	42	14	106	5	4.71%
Whooping cough	357	43	2	316	51	16.13%
Erysipelas	133	16	3	120	8	6.66%
Chicken-pox	85	12	4	77	1	—
Enteric fever	11	5	—	6	—	—
Dysentery	22	11	1	12	—	—
Mumps.....	35	4	1	32	—	—
Cerebro-spinal meningitis..	9	7	3	5	—	—
Pneumonia	2	1	—	1	1	—
Pemphigus	3	1	1	3	—	—
Rubella	28	10	25	43	—	—
Vincent's angina	4	4	3	3	—	—
Encephalitis	1	1	—	—	1	—
Anterior poliomyelitis	—	—	5	5	3	—
Miscellaneous observations .	50	—	—	—	—	—
TOTALS	874	157	62	729	70	—

Operations

Mastoidectomy	22
Incisions	16
Tonsillectomy and adenoidectomy	10
Appendicectomy	2
Amputation of finger	1
Extradural abscess	1
Injury to hand—repair of tendons.....	1
Miscellaneous	13
TOTAL	66

The surgeons attended on forty-one occasions to perform the above operations, and they also attended on several occasions when no operations were performed.

Laboratory

The following table contains a summary of the work conducted in the hospital laboratory during 1938:

<i>Examinations.</i>	<i>Numbers.</i>
Specimens for <i>B. diphtheriæ</i> (positive)	1,590
Specimens for <i>B. diphtheriæ</i> (negative)	3,455
Specimens for streptococci (hæmolytic)	26
Specimens for streptococci (non-hæmolytic)	19
Specimens for streptococci (not classified as above)	122
Specimens for streptococci (negative)	16
Blood bacteriological	16
Blood Widal	18
Blood counts.....	31
Blood hæmoglobin estimations	18
Cerebro-spinal fluid. Bacteriological examinations	78
Cerebro-spinal fluid. Chemical examinations	125
Cerebro-spinal fluid. Cytological examinations	28
Bacteriological examination of fæces	17
Specimens for Vincent's angina (positive)	3
Specimens for Vincent's angina (negative)	30
Specimens for tubercle bacilli (positive)	1
Specimens for tubercle bacilli (negative)	14
Typing of selected positive diphtheria swabs.....	152
Miscellaneous bacteriological examinations	39
Urines for albumen (positive)	850
Urines for albumen (negative)	305
Urines for blood (positive)	42
Urines for blood (negative)	14
Urines for sugar (positive)	—
Urines for sugar (negative).....	27
Urines for miscellaneous examination	39
Urines for deposit (microscopical examination).....	487
TOTAL	7,562

Staff Prophylaxis

All members of the nursing and domestic staff were Schick and Dick tested soon after entering the hospital.

Dick and Schick tested	84
Dick -	} 44
Schick -	
Dick+	} 11
Schick+	
Dick+	} 8
Schick -	
Dick -	} 21
Schick+	
TOTAL	84

Schick+	32
Acquired immunity one month after treatment	19
Required extra treatment and remains positive	1
Developed diphtheria during treatment	1
Remains positive but treatment not yet finished.....	3
Left before treatment finished	8
TOTAL	32

Dick+	19
Acquired immunity one month after treatment	16
Requires extra treatment.....	1
Left before treatment finished.....	2
TOTAL	19

In addition the existing members of the staff are tested at six-monthly intervals.

Sickness amongst the staff during 1938

Diphtheria	1
Measles	1
Erysipelas	1
Rubella	4
Mumps	2
Tonsillitis	27
Influenzal cold.....	6
Sub-acute rheumatism	1
Auricular fibrillation	1
Dysentery	1
Pneumonia	2
Appendicitis	1
Pyelitis	1
Shingles	1
Catarrhal jaundice	3
Quinsy	2
Gastritis	2
Scabies	4
Dermatitis.....	3
Conjunctivitis	1
Blepharitis	1
TOTAL	66

There was a marked fall in the incidence of tonsillitis in the staff during the year, as compared with the previous year. The case of diphtheria was of a mild type and occurred in a nurse who had not completed her course of immunisation. The two cases of pneumonia both made good uninterrupted recoveries. The case of auricular fibrillation occurred in a sister who had an attack of rheumatism five years previously and had not responded well to treatment.

PREVENTION OF BLINDNESS

General outline of facilities available in the city

These may be conveniently summarised into the following groups:

1	ANTE-NATAL	Examination, supervision and treatment of the expectant mother.
2	INFANCY	Measures taken to prevent blindness in children under one year of age.
3	PRE-SCHOOL	Preventive measures as applied to children between one and five years of age.
4	SCHOOL AGE	Ascertainment and treatment of eye diseases in children between five and fourteen years of age.
5	ADOLESCENT AND ADULT LIFE....	—

(1) *Ante-natal*

The condition of greatest importance as having an adverse influence in the ante-natal stage is venereal disease, and from the point of view of prevention of blindness in the child the presence of the disease in the mother should be detected as early as possible and appropriate treatment given.

The co-ordination of ante-natal work with that of venereal diseases is continually being emphasised both by the Prevention of Blindness Committee and also the Ministry of Health in Circular 1476, 1935. Where it is possible to arrange for women and children to receive treatment for venereal diseases at a clinic in association with a maternity and child welfare clinic rather than at the recognised venereal diseases centre, such an arrangement is desirable. Such facilities are available at a combined maternity and child welfare centre and venereal disease treatment centre in two-storied premises at Lancaster Street, and good preventive work continues to be done there, with the co-operation of the ante-natal clinics, which refer all doubtful cases to the venereal diseases centre for diagnosis.

For England and Wales 54 per cent of expectant mothers attend ante-natal centres, the corresponding figure for Birmingham being 66 per cent. This obviously affords ground for excellent preventive work. In 1938 420 new cases attended the venereal diseases centre from the ante-natal clinics, twenty-seven of these proving to be infected. The condition in the remaining 393 cases was non-venereal.

(2) *Infancy*

During the child's first year of life the principal source of blindness is that coming from infection with ophthalmia neonatorum.

The following measures are taken to combat this condition :

(a) Prophylactic measures are adopted as soon as the child is born, by the routine instillation into the eyes of proflavin, 1 in 500, in oily solution. This procedure effectively prevents infection occurring where efficiently applied.

(b) Adequate provision of hospital accommodation for babies suffering from this condition and for their mothers ; and the routine reminder of the practitioner as to these facilities in connection with each ophthalmia notification.

(c) By arrangement between the Public Health Committee and the Eye Hospital two externe nurses are engaged to deal with cases of ophthalmia neonatorum and two for conditions other than ophthalmia neonatorum. They attend each morning at the hospital when they see the cases together with the surgeon and note the recommended treatment. Each case is then visited daily at home, treatment given and instructions passed on to parents in regard to future treatment and the necessity for re-attendance at hospital. Apart from any treatment given at the home by the nurses, each case attends three times weekly at the hospital. Necessary cases have their fares paid.

The nurses are general trained with ophthalmic training, and have had eighteen months' experience as staff nurses at the Eye Hospital.

(3) *Pre-school*

Generally it may be said the supervision of this group is undertaken by the Maternity and Child Welfare Department and the medical officers dealing with nursery schools, etc., in the ordinary course of their work.

The ascertainment of eye conditions which might lead to loss of sight depends, therefore, on the observations of the maternity and child welfare staff (medical and nursing). Doubtful cases seen by this staff are referred either to the Eye Hospital or to the Children's Hospital, the latter institution having dealt with 269 cases of squint thus referred to them in 1938.

So far as concerns blindness liable to occur in the pre-school child after the infectious diseases, the services of an ophthalmologist are available at the Fever Hospital for the treatment of eye complications following such diseases.

(4) *School Age*

Measures to deal with this group include the following provision made by the School Medical Service :

- (a) Early detection of visual defects.
- (b) Services of ophthalmic surgeon available.
- (c) Close co-operation with the Eye Hospital.

(5) *Adolescence*

If one takes the partially-sighted children in this group, for instance, the myopics, it is the practice to keep these children under supervision until school leaving age, but thereafter for young workers in early adolescence neither examination nor treatment is statutorily provided. In order to deal with this gap between leaving school and coming within the scope of the National Health Insurance, the Public Health Committee made arrangements through the Education Committee for these special children to continue under the supervision of the school ophthalmic surgeon.

(6) *Adults : Occupational Blindness*

1.9 per cent of blind cases registered in the city are caused by industrial traumas, as compared with 1.39 per cent for the whole of the country. It is doubtful whether this figure will be reduced except in relation to the reduction of the general accident rate, as it must be remembered that many of the accidents involved the head and sometimes the whole body.

(7) *Infectious Disease*

The principal disease prone to cause blindness is measles, and to combat it a scheme is in effect whereby serum is available either to prevent the occurrence of measles in a contact or to cause a mild attack only. The services of an ophthalmic surgeon are also available on demand at the Fever Hospital.

(8) *General*

The Eye Hospital, assisted by a substantial grant from the Public Health Committee, established in country surroundings an annexe containing twenty beds for children and twelve for adult females. To this annexe are referred those types of eye conditions which in ordinary hospital environment would take many months to clear up, but which in these healthy surroundings rapidly return to normal. There is no doubt that this will play its important part in the prevention of blindness.

Admirable work is also being done at two hospitals in the city in the correction of squint, a condition which is prone to lead to blindness in the squinting eye.

The City Council are responsible for the administration of the Blind Persons Acts, 1920 and 1938, and have made arrangements with the Birmingham Royal Institution for the Blind for the following services to be provided on their behalf:

(a) *Workshop Employees*

At the end of the year under review there were 208 workshop employees registered. The trades practised are, for men : basket-making, brush-making, bedding, cane furniture, chair seating, etc. ; for women : hand

knitting, round and flat machine knitting, chair seating, etc. Although the weekly pay of these employees is at the trade union or other standard rate customary in the particular class of work on which the blind person is employed, the handicap of blindness prevents most blind persons from earning a livelihood if they are paid only what they can earn on a strictly commercial basis. It is necessary, therefore, to augment their earnings and during 1938-39 the City Council paid £12,278 for that purpose.

(b) *Home Workers*

There are twenty-seven of these workers registered. Their ages vary from about twenty to seventy years, and the occupations carried out are similar to those of the workshop employees, plus such work as wood-chopping, piano tuning and repairing, music teaching, netting, boot repairing, etc.

Each home worker is provided with the requisite tools and equipment for his particular trade, and where necessary work-sheds are provided. Raw materials are supplied at cost price, and every assistance is given in helping him to dispose of his goods. Augmentation of earnings is provided for the home worker, and the amount paid by the City Council for this purpose was £1,355.

(c) *Unemployables*

These constitute the largest category of the blind, and 1,042 were on the register in 1938. The needs of these persons are two-fold: financial and social. Financial assistance is provided by the local authority making up their income to 25/- per week, in addition to which the needs of dependants are taken into consideration. The cost to the Corporation of this service was £20,334. As regards social assistance, the pivot of this service is the home teacher, whose duties include the teaching of Braille and Moon type, pastime occupation, home visiting and welfare work. The aim of the service is to secure that systematic home visiting should be provided for all blind persons needing it.

Cowley Home

During the year 1937 building extensions were carried out, and this Home now provides accommodation for some thirty otherwise homeless blind women. The contribution by the local authority towards the administrative costs of this Home for 1938-39 was £499.

Other responsibilities in relation to the welfare of the blind undertaken by the City Council include such matters as the maintenance of blind children at Sunshine Home. The contribution to the cost by the local authority for 1938-39 was £81.

The total contribution for all the blind services for 1938-39 was £39,268.

The following table gives particulars relating to *all* blind persons resident in Birmingham, including those mentioned above as coming within the scope of the Public Health Committee's responsibilities :

	<i>Males.</i>	<i>Females.</i>	<i>Total.</i>
Babies in Sunshine Home	1	1	2
Babies at home	2	5	7
Babies in Public Assistance Institutions	—	—	—
Children at school : Resident	10	16	26
Day	3	5	8
Children of school age :			
At Home	1	2	3
In Public Assistance Institutions	8	4	12
In Public Health Department Hospitals	—	1	1
Adults in training : Resident	2	3	5
Day	11	6	17
Adults awaiting training	4	—	4
Workshop workers recognised	144	64	208
Other blind employees	13	8	21
Trained home workers	18	9	27
Unemployables :			
At Home	408	559	967
In Public Assistance Institutions	39	56	95
In Public Health Department Hospitals	5	14	19
In Cowley Home	—	14	14
TOTALS	669	767	1,436

REPORT ON TUBERCULOSIS

By DR. G. B. DIXON, *Chief Clinical Tuberculosis Officer*

Institutions and Accommodation Provided

The Birmingham Public Health Committee maintains a single dispensary which serves the whole of the city. In addition, it provides 611 beds for the treatment of pulmonary and other forms of tuberculosis and for the observation and investigation of suspected cases of tuberculosis.

The Anti-Tuberculosis Centre, centrally situated in the city, is open for five days during the week, and on Saturdays for half the day. A small number of sessions is reserved for patients attending for treatment, supervision and observation, but most of the sessions are set apart for consultations and examinations. Many consultations and examinations are undertaken at the homes of patients by members of the medical staff. The medical staff of the dispensary, with one exception, is also responsible for the medical work of the various municipal sanatoria.

The beds for treatment, etc., are provided in four sanatoria and are allocated in the following way :

YARDLEY GREEN ROAD SANATORIUM

	<i>Beds.</i>	<i>Total.</i>
ADULTS :		
MALE : Observation	10	} 164
Treatment, intermediate and advanced cases of all forms of tuberculosis	154	
FEMALE : Observation	8	} 52
Treatment, early and intermediate cases of all forms of tuberculosis	44	
CHILDREN :		
Observation	18	} 119
Treatment, all stages and for all forms of tuberculosis	101	
TOTAL		335

WEST HEATH SANATORIUM

	<i>Beds.</i>
ADULTS :	
MALE : Advanced and intermediate cases of pulmonary tuberculosis	24
FEMALE : Advanced and intermediate cases of pulmonary tuberculosis	96
TOTAL	120

SALTERLEY GRANGE SANATORIUM

	<i>Beds.</i>
ADULTS :	
MALE : Early cases of pulmonary tuberculosis.....	38
FEMALE : Early cases of pulmonary tuberculosis.....	30
TOTAL	68

ROMSLEY HILL SANATORIUM

	<i>Beds.</i>
ADULTS :	
MALE : Early and intermediate cases of pulmonary tuberculosis	57
FEMALE : Early and intermediate cases of pulmonary tuberculosis	31
TOTAL	88

GRAND TOTAL : 611.

The treatment undertaken in the different sanatoria includes lung collapse by means of artificial pneumothorax, the use of gold salts, vaccines, etc. In a limited number of cases different forms of surgical treatment for patients suffering from pulmonary tuberculosis have been undertaken, such as thoracoplasty, and severance of adhesions in cases of artificial pneumothorax ; the latter operation has given satisfactory results.

During the year, an operating theatre was provided at Yardley Green Road Sanatorium where operative work for all our Sanatoria will be undertaken ; it includes a theatre, an anæsthetic room, sterilisation room, and two recovery cubicles and other essential rooms. During the six

months of the year that the theatre has been available, twenty-two major operations were undertaken, including five thoracoplasty operations, one amputation and one excision of glands, etc.

At the Yardley Green Road Sanatorium, which is situated $3\frac{1}{2}$ miles from the centre of the city, the patients are housed in eight detached pavilions. The kitchens, domestic stores, nurses' home, and medical officers' apartments are included in a large central building.

The cooking is undertaken in one kitchen, and food is conveyed to the four dining halls by means of electric trolleys.

The sanatorium buildings include an administrative office block, in which there is a laboratory. There are also occupational therapy shops, a schoolroom, and three recreation halls, a department for X-ray work, a section for artificial light treatment, which is used both for in-patients and out-patients, and a surgical block.

The clinical blocks at West Heath Sanatorium, which is situated eight miles from the centre of the city, consist of one pavilion for male cases and four pavilions for female cases, two of which have recently been reconstructed and fitted with large verandahs. There has recently been built a rest room for female patients with chronic disease who are infective and cannot be properly isolated at home. Many of them remain in the West Heath Sanatorium hospital for prolonged periods. In addition, there is a laboratory and an occupational therapy shop.

Romsley Hill Sanatorium, which is situated twelve miles from the centre of the city, is a two-storey building, which provides a number of cubicles for one, two, three, four and six beds. There are also several wards for ten and eleven beds. In addition, there are two recreation rooms, one for men and one for women, and the sanatorium has two occupational therapy shops and a laboratory.

Salterley Grange Sanatorium, situated in the Cotswolds, forty miles from the centre of the city, consists of a large administrative block containing residential quarters for the staff and, in addition, a kitchen, stores, and a dining hall for the patients. There are two recreation rooms for patients and a laboratory. The accommodation for patients includes forty single bed rooms, eleven rooms accommodating two beds, and two rooms which accommodate three patients.

In addition to the patients admitted to the City Sanatoria, during the year there were twelve male adults, eleven female adults, and forty-nine children suffering from the non-pulmonary forms of tuberculosis, who were admitted to various hospitals, including the Royal Cripples Hospitals, Moseley Hall, and the Children's Hospital, etc., for the treatment of non-pulmonary forms of tuberculosis. A grant towards the maintenance of these patients was made by the Public Health Committee.

During the year the home visits made by the medical staff numbered 1,237. The personal consultations between members of the medical staff

and practitioners in the city during the year was 290 ; in addition, there were 7,712 other consultations with medical practitioners during the year.

Many persons attended at the City Sanatorium, Yardley Green Road, as out-patients, for artificial light treatment. During the year under review the number of attendances for this purpose was 12,219.

Admissions to the Sanatoria are decided upon only after examination at the Centre or at the patients' homes, and the sanatorium to which patients are sent depends on the condition of the disease, etc. On returning from sanatoria patients are re-examined at the Centre and many old patients who discontinue treatment are re-examined from time to time.

The Anti-Tuberculosis Scheme includes thirty-six beds at Yardley Green Road Sanatorium set apart for the purpose of observation and investigation : ten are reserved for boys ; ten are reserved for adult males ; eight are reserved for adult females ; and eight are reserved for female children.

The provision of these beds facilitates a correct diagnosis which would in some cases be difficult to arrive at without them.

The scheme is also fortunate in having a large number of beds set apart for the care and treatment of the "hospital" type of case, the male patients being admitted to Yardley Green Road Sanatorium and the females to West Heath Sanatorium. These beds are essential on humanitarian grounds, and, in addition, are a prophylactic asset in connection with the public health of the city. For this reason it is desirable that as large a percentage as possible of the annual deaths occurring in the city from tuberculosis should take place in beds controlled by the Public Health Department.

During the period under review there were 813 deaths in the city from all forms of tuberculosis, and of this number no less than 418, or 51·3 per cent, occurred in beds in the municipal sanatoria and hospitals controlled by the Public Health Committee. A small number of beds is reserved in one of the municipal hospitals for tuberculous patients who require obstetric treatment.

Subsequent tables show the reduction that has taken place in the death-rate from tuberculosis in all forms, and in the pulmonary and non-pulmonary varieties separately in the city over a number of years. In the first tables two hemi-decades with an interval of ten years have been chosen for comparison. In the latter table dealing with the incidence of tuberculosis, two periods of three years, with an interval of ten years, have been compared, to show the decrease that has taken place in the occurrence of tuberculosis as indicated by notification. Amongst the deaths certified as having been caused by tuberculosis during the year were those of seventy-one persons who had been notified as suffering from this

disease ten or more years ago, and in addition seventy-five deaths from tuberculosis were certified during the year amongst persons who had been notified five or more years ago.

Quite a number of those suffering from tuberculosis who receive treatment recover from the disease. Last year 460 persons who had recovered were removed from the register, and in 971 instances the disease was in an arrested state, although the individuals were being kept under supervision as a precautionary measure. At present there are 5,366 known cases of tuberculosis in the city, being in the proportion of approximately five cases to one thousand of the population.

The mean mortality from tuberculosis for two comparable five-year periods has been as follows :

ALL FORMS OF TUBERCULOSIS AT ALL AGES

	<i>Death-rate per 1,000.</i>
Five years : 1924-1928	1·07
1934-1938	0·79

Reduction : 26 per cent.

PULMONARY TUBERCULOSIS AT ALL AGES

	<i>Death-rate per 1,000.</i>
Five years : 1924-1928	0·93
1934-1938	0·71

Reduction : 24 per cent.

NON-PULMONARY TUBERCULOSIS AT ALL AGES

	<i>Death-rate per 1,000.</i>
Five years : 1924-1928	0·14
1934-1938	0·08

Reduction : 43 per cent.

These figures show a very substantial decrease in the mortality during the past fourteen years.

The new cases of tuberculosis (all forms) over a period of years also show a considerable reduction. To illustrate this, two three-year periods are compared—i.e., 1926-1928 with 1936-1938.

NEW CASES OF TUBERCULOSIS (ALL FORMS)

	<i>Incidence per 1,000.</i>
Three years : 1926-1928	1.73
1936-1938	1.11

Reduction : 36 per cent.

The notified cases of tuberculosis showed an increase during the year 1938, the number being 1,209, as compared with 1,119 in the year 1937 ; also amongst the cases of tuberculosis notified during the past year, thirty-four had resided in the city for less than one year, suggesting that they may have come to reside here from other districts, already suffering from tuberculosis.

The number of cases and deaths occurring in past years is shown in the following table :

TUBERCULOSIS (ALL FORMS)

	<i>New Cases.</i>	<i>Rate per 1,000.</i>	<i>Deaths.</i>	<i>Death-rate per 1,000.</i>
1901-1905 (average).....	—	—	1,384	1.78
1906-1910 „	—	—	1,235	1.51
1911-1915 „	—	—	1,307	1.51
1916-1920 „	3,343	3.73	1,261	1.40
1921-1925 „	2,060	2.20	1,046	1.12
1926-1930 „	1,588	1.63	1,016	1.04
1931-1935 „	1,459	1.43	928	0.91
1922.....	1,961	2.12	1,049	1.13
1923.....	2,166	2.32	1,006	1.08
1924.....	2,129	2.22	1,055	1.10
1925.....	1,797	1.89	1,083	1.14
1926.....	1,704	1.78	1,024	1.06
1927.....	1,607	1.66	1,017	1.05
1928.....	1,606	1.64	965	0.99
1929.....	1,538	1.57	1,066	1.09
1930.....	1,483	1.51	1,008	1.03
1931.....	1,679	1.66	1,070	1.06
1932.....	1,517	1.49	954	0.93
1933.....	1,486	1.45	983	0.96
1934.....	1,398	1.36	814	0.79
1935.....	1,213	1.17	817	0.79
1936.....	1,136	1.10	805	0.78
1937.....	1,119	1.07	836	0.80
1938.....	1,209	1.15	813	0.78

The relative prevalence and mortality from pulmonary and other forms of tuberculosis, shown separately, is indicated in the two subsequent tables :

PULMONARY TUBERCULOSIS

	<i>New Cases.</i>	<i>Rate per 1,000.</i>	<i>Deaths.</i>	<i>Death-rate per 1,000.</i>
1901-1905 (average).....	—	—	1,039	1·34
1906-1910 " 	—	—	947	1·16
1911-1915 " 	—	—	1,057	1·22
1916-1920 " 	2,936	3·27	1,062	1·18
1921-1925 " 	1,739	1·86	903	0·96
1926-1930 " 	1,327	1·36	881	0·91
1931-1935 " 	1,225	1·20	824	0·80
1919.....	2,704	2·92	1,019	1·10
1920.....	2,609	2·87	843	0·93
1921.....	1,969	2·15	890	0·97
1922.....	1,669	1·80	899	0·97
1923.....	1,785	1·91	860	0·92
1924.....	1,780	1·85	934	0·97
1925.....	1,491	1·57	930	0·98
1926 	1,421	1·48	905	0·94
1927.....	1,343	1·39	857	0·89
1928 	1,361	1·39	840	0·86
1929.....	1,270	1·30	918	0·94
1930.....	1,242	1·26	884	0·90
1931.....	1,397	1·38	932	0·92
1932.....	1,266	1·24	849	0·83
1933.....	1,250	1·22	874	0·85
1934.....	1,187	1·15	732	0·71
1935.....	1,023	0·99	732	0·71
1936.....	962	0·93	734	0·71
1937.....	965	0·93	756	0·72
1938.....	1,011	0·96	732	0·70

NON-PULMONARY TUBERCULOSIS

	<i>New Cases.</i>	<i>Rate per 1,000.</i>	<i>Deaths.</i>	<i>Death-rate per 1,000.</i>
1901-1905 (average).....	—	—	345	0·45
1906-1910 „	—	—	289	0·35
1911-1915 „	—	—	249	0·29
1916-1920 „	407	0·45	199	0·22
1921-1925 „	321	0·34	143	0·15
1926-1930 „	260	0·27	135	0·13
1931-1935 „	234	0·23	104	0·10
1919.....	412	0·45	169	0·18
1920.....	365	0·40	158	0·17
1921.....	278	0·30	145	0·16
1922.....	292	0·32	150	0·16
1923.....	381	0·41	146	0·16
1924.....	349	0·36	121	0·13
1925.....	306	0·32	153	0·16
1926.....	283	0·30	119	0·12
1927.....	264	0·27	160	0·17
1928.....	245	0·25	125	0·13
1929.....	268	0·27	148	0·15
1930.....	241	0·25	124	0·13
1931.....	282	0·28	138	0·14
1932.....	251	0·25	105	0·10
1933.....	236	0·23	109	0·11
1934.....	211	0·21	82	0·08
1935.....	190	0·18	85	0·08
1936.....	174	0·17	71	0·07
1937.....	154	0·15	80	0·08
1938.....	198	0·19	81	0·08

The cases notified in 1938 comprise the varieties shown in the next table, which also indicates the number of cases in which information was obtained from the death certificates alone, without previous notifications.

The total number of deaths is also shown.

	<i>New Cases notified in 1938.</i>	<i>Cases not notified before death.</i>	<i>Total deaths.</i>
Pulmonary tuberculosis	1,011	24	732
Tubercular meningitis	28	4	32
Tubercle of the abdomen	21	4	9
Tubercle of the spinal column	23	—	7
Tubercle of the joints	32	—	1
Disseminated tuberculosis	10	5	23
Tubercle of other organs	84	4	9

The number of instances in which tuberculosis was not notified prior to death was forty-one for all forms of the disease; twenty-four were of the pulmonary type, and seventeen were of the non-pulmonary, which shows a decrease of forty compared with the year 1937.

Nineteen were only diagnosed as the result of autopsies. Twenty-three died in their homes and eighteen in hospitals, and six were the subject of a coroner's enquiry. In six cases cancer was also present, and in three intestinal obstruction was associated; diabetes was associated in six instances and mental disorder in two. In nineteen of these individuals the age at death was fifty years or over.

Had so many of these persons not died in hospitals the number of autopsies would have been definitely fewer and tuberculosis would probably have escaped detection in a certain proportion.

After-death notifications cannot invariably be accepted as evidence of ineffective diagnosis, or imperfect notifications, during the lifetime of the patient. They may bear some relationship to the number of hospital beds available in the area, and to the activities of the local pathological departments. They seem to indicate too that a death certificate should set out the causes of death without being a complete catalogue of the pathological findings.

The home contacts of some of these persons were investigated, and some are being kept under supervision, which was an advantage to a number of children and adolescents who might not otherwise have been dealt with.

In the following table are shown the number of some forms of tuberculosis notified during the year, with the sex and age period at which they occurred.

CASES OF TUBERCULOSIS NOTIFIED DURING THE YEAR 1938, CLASSIFIED ACCORDING TO SEX AND AGE.

	0-	1-	2-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75 (up)	Totals.
Pulmonary Tuberculosis.... { M. F.	1 5	7 6	8 8	12 6	6 12	60 67	78 77	110 99	117 42	106 38	77 25	29 8	6 1	617 394
Tubercular Meningitis { M. F.	1 3	2 5	— 3	4 3	— 2	1 1	— 1	— 1	— —	— —	1 —	— —	— —	9 19
Tuberculosis of Peritoneum { and Intestines { M. F.	— —	— —	1 —	1 1	— 1	2 3	2 2	— 2	1 3	1 —	— —	1 —	— —	9 12
Other Forms of Tuberculosis { M. F.	3 1	2 3	7 13	9 9	5 4	12 6	10 7	17 10	2 7	3 6	5 1	4 3	— —	79 70

In the subsequent table are shown the number of notifications and the number of deaths, arranged for males and females, according to the various age groups, relating to both pulmonary and non-pulmonary forms of tuberculosis :

TUBERCULOSIS, 1938

<i>Pulmonary.</i>	<i>Male.</i>		<i>Female.</i>	
	<i>Cases.</i>	<i>Deaths.</i>	<i>Cases.</i>	<i>Deaths.</i>
0-	1	—	5	4
1-	7	1	6	2
2- 4	8	—	8	—
5-14	18	2	18	6
15-24	138	61	144	79
25-44	227	157	141	124
45-64	183	193	63	57
65-74	29	32	8	9
75 (up)	6	4	1	1
	617	450	394	282
CASES TOTAL : 1,011. DEATHS TOTAL : 732.				
<i>Non-pulmonary.</i>	<i>Male.</i>		<i>Female.</i>	
	<i>Cases.</i>	<i>Deaths.</i>	<i>Cases.</i>	<i>Deaths.</i>
0-	4	2	4	3
1-	4	4	8	7
2- 4	8	3	16	6
5-14	19	5	20	5
15-24	27	8	20	8
25-44	19	7	23	7
45-64	10	8	7	2
65-74	5	3	3	3
75 (up)	—	—	—	—
	96	40	101	41
CASES TOTAL : 197. DEATHS TOTAL : 81.				
GRAND TOTALS : CASES, 1,208. DEATHS, 813.				

The tuberculosis case-rates and death-rates in other towns for all forms of tuberculosis are given in the following tables :

TUBERCULOSIS (ALL FORMS). COMPARATIVE FIGURES IN ELEVEN
LARGEST TOWNS

	<i>Case-rate per 1000.</i>	<i>Death-rate per 1000.</i>
London	1 52	0·72
Glasgow	2·17	1·09
<i>Birmingham</i>	1·15	0·78
Liverpool.....	2·04	0·89
Manchester	1·67	0·97
Sheffield	2·08	0·58
Leeds	1·39	0·80
Edinburgh	1·50	0·75
Bristol	1·60	0·64
Hull	1·63	0·89
Bradford	0·93	0·63

It will be seen that Birmingham compares favourably with other great towns.

Tuberculosis in the City Wards

The distribution of cases of tuberculosis over the wards of the city is shown in the next tables :

CASE RATE PER 1000 IN 1938

	<i>Pulmonary.</i>	<i>Non-pulmonary.</i>	<i>Total.</i>
CENTRAL WARDS.			
St. Paul's	0.96	0.29	1.25
St. Mary's	1.62	0.20	1.82
Duddeston and Nechells	1.36	0.18	1.54
St. Bartholomew's ..	1.20	0.28	1.48
St. Martin's & Deritend	1.28	0.36	1.64
Market Hall	1.31	0.17	1.48
Ladywood	1.24	0.19	1.43
Average...1.52.			
MIDDLE WARDS.			
Lozells	1.27	0.15	1.42
Aston	1.24	0.13	1.37
Washwood Heath	0.87	0.22	1.09
Saltley	0.94	0.14	1.08
Small Heath	0.69	0.07	0.76
Sparkbrook	1.30	0.17	1.47
Balsall Heath	1.11	0.16	1.27
Edgbaston	0.80	0.23	1.03
Rotton Park	0.71	0.14	0.85
All Saints	1.30	0.25	1.55
Average...1.19.			
OUTER RING.			
Soho	1.07	0.21	1.28
Sandwell	0.50	0.10	0.60
Handsworth	1.20	0.11	1.31
Perry Barr	0.74	0.17	0.91
Erdington	0.68	0.29	0.97
Gravelly Hill	1.01	0.26	1.27
Bromford	1.08	0.29	1.37
Stechford	1.01	0.29	1.30
Yardley	0.69	0.03	0.72
Acocck's Green	0.74	0.27	1.01
Hall Green	0.62	0.07	0.69
Sparkhill	0.89	0.13	1.02
Moseley & King's Heath	0.54	0.16	0.70
Selly Oak	0.67	0.13	0.80
King's Norton	0.89	0.18	1.07
Northfield	0.93	0.18	1.11
Harborne	0.60	0.10	0.70
Average...0.99.			

There has been a slight increase in the Central and Middle Wards and Outer Ring.

The figures for 1937 for these three divisions were 1.43, 1.13 and 0.89 respectively.

CASES OF TUBERCULOUS DISEASE NOTIFIED DURING THE YEAR 1938, CLASSIFIED ACCORDING TO WARDS

DISEASE.	Acceh's Green.	All Saints.	Aston.	Balsall Heath.	Bromford.	Duddeston and Nechells.	Edgbaston.	Erdington.	Gravelly Hill.	Hall Green.	Handsworth.	Harborne.	King's Norton.	Ladywood.	Lozells.	Market Hall.	Moseley and King's Heath.	Northfield.	Perry Barr.	Rotton Park.	St. Bartholomew's.	St. Martin's and Deritend.	St. Mary's.	St. Paul's.	Saitley.	Sandwell.	Selly Oak.	Small Heath.	Soho.	Sparbrook.	Sparkhill.	Stechford.	Washwood Heath.	Yardley.	Not Located.	CITY.
Pulmonary Tuberculosis.	25	37	39	34	30	46	21	19	31	26	32	18	30	32	34	23	21	42	47	21	34	39	40	26	26	10	21	19	25	37	28	35	28	21	14	1011
Tubercular Meningitis ..	—	1	1	—	1	1	1	1	2	—	1	—	1	—	—	1	1	1	2	—	3	2	—	1	1	—	—	1	—	2	1	1	1	—	—	28
Tuberculosis of Peritoneum and Intestines...	—	—	—	1	2	—	2	2	2	1	—	1	—	—	1	1	—	1	—	1	1	1	—	—	—	—	—	—	—	1	—	2	—	1	—	21
Tuberculosis of Spinal Column	3	1	—	2	1	1	—	1	—	1	—	1	—	—	—	—	—	2	2	1	1	—	1	1	—	—	—	—	1	—	—	1	1	—	—	23
Tuberculosis of the Joints	3	2	2	—	1	—	—	1	—	—	1	—	2	2	—	1	2	—	2	1	—	2	2	—	—	1	—	—	1	1	1	—	4	—	—	32
Tuberculosis of other Organs	3	2	1	2	3	4	2	2	4	1	1	1	3	2	2	—	3	4	4	1	4	4	2	6	3	1	3	1	1	3	2	3	6	—	—	84
Disseminated Tuberculosis	—	—	—	—	—	—	1	2	—	—	—	—	—	1	1	—	—	—	1	—	—	2	—	—	—	—	—	—	—	—	—	1	—	1	10	

Work of the Tuberculosis Visitors

There are ten nurses engaged as tuberculosis visitors in the Department each having charge of a definite part of the city. It is the duty of these visitors to make enquiry into every notified case of tuberculosis and afterwards to keep in touch by periodical visiting and carry out any after-care, etc., that may be needed.

At the end of 1938 there were 5,366 cases of tuberculosis on the current register, all of which have to be visited at more or less regular intervals. The visits paid last year were as follows :

Primary visits (to new cases)	1,426
Routine re-visits	21,108
Special visits and re-visits	8,585

At the first visit to new cases it was found that 662 patients out of 1,426 were sharing a bed with some other person, while 350 shared a bedroom but had a separate bed. Efforts are always made to secure a separate bedroom, or if this is out of the question, at least a separate bed for every patient. Unfortunately, owing to lack of accommodation or unwillingness on the part of the patient, this is not always possible.

It is the duty of these visitors to bring to the notice of the department every case of overcrowding in relation to pulmonary tuberculosis for representation to the Estates Department for special treatment, if considered advisable by the medical staff.

Action under Legal Enactments

It was unnecessary during the year to take action under the Public Health (Prevention of Tuberculosis) Regulations, 1925, relating to tuberculous employees in the milk trade, nor was Section 172 of the Public Health Act, 1936, employed to remove any patient, compulsorily, to a sanatorium.

Disinfection

The disinfection of 1,735 houses was undertaken during the year, where some member of the family had suffered or died from tuberculosis, or changed his or her address.

Care Work

A considerable amount of care work is undertaken from the Centre in Great Charles Street and its scope is varied.

It is found that such work can be usefully fitted into the dispensary organisation if executive officers are interested, tactful and alert, and have the experience which goes far in making a success of care work.

During the year 1938 the tuberculosis health visitors made 31,119 visits (exclusive of useless calls) to the homes of patients, and care work was responsible for many of them. In addition, 1,237 visits were made to the houses of patients by members of the medical staff, many of them for a similar purpose.

In the same period 129 persons received beds and bedding on loan or hire-purchase from the Department. Thirty-two sleeping chalets were also loaned to patients. Opportunity for the use of these chalets is largely governed by the fitness of the patient to sleep or rest for prolonged periods out of doors unattended, and by the existence of a suitable site. Beds, bedding and sleeping chalets are loaned in order to provide more suitable accommodation for the patient and to lessen as far as possible the risk of infection to other members of the family.

Through the representations of the Care Department we obtained better housing conditions, or promises of the same, through the Estates Department, for the families of forty-eight of our patients. Grants of clothing and other personal items were made to patients in some 268 instances. Also a large number of recommendations for relief and assistance were made to various charitable organisations both within and without the city.

The Care Department has been instrumental in assisting our patients and their families to obtain suitable medical treatment for ailments other than tuberculosis, and grants of food have been made to 178 patients.

To prevent overlapping between ourselves and the Public Assistance Department a note is sent from the Centre each week to the Public Assistance Department informing the latter of any grants made to our patients.

In addition to the activities already outlined, the Department has helped patients to obtain dentures, air-rings, and other nursing utensils, surgical appliances and splints, and has assisted in some instances in the provision of meals. It has obtained money to pay bus and tram fares to enable patients to procure treatment and examination here.

The close intercommunication existing between the Tuberculosis Section and the School Medical Officer's Department and the Infant Welfare Officer has provided opportunities for the Care Committee to function in a wider sphere than would have been possible otherwise.

The tuberculous individual is a damaged life, and however good the results of treatment may have been the sufferer can seldom be regarded as having a 100 per cent economic value to the community. Unfortunately industrial conditions present few openings for the partially disabled tubercular person, a number of whom are able to work four or six hours daily in suitable environment, at their own pace. To help this type of

patient workshops are provided at Yardley Green Road Sanatorium, where ex-patients attend and work under medical supervision in hygienic surroundings for a limited number of hours daily. As a result of this an appreciable sum of money derived from the sale of their work is paid out weekly.

Anti-Tuberculosis Centre

Attendances and Examinations

The total number of attendances at the Anti-Tuberculosis Centre during the year 1938, made by patients for the purpose of diagnosis, consultation, observation, advice, and treatment, was 37,136—an increase over the previous year.

The total is made up of 1,520 attendances for supervision, observation and advice ; 11,001 attendances for examination ; 10,035 attendances for X-ray examination ; and 14,580 attendances in the artificial light departments. The X-ray work included 7,578 screen examinations and 2,457 films. In addition there were 526 screen examinations and 619 films taken at Yardley Green Road Sanatorium.

Attendances for supervision, observation and treatment.....	1,520
Attendances for consultation and examination	11,001
Attendances for light treatment :	
Yardley Green Road Sanatorium.....	12,219
151, Great Charles Street	2,361
X-ray examinations (screens)	7,578
X-ray examinations (films)	2,457
TOTAL	37,136

During the year 1938 some 1,011 new cases of pulmonary tuberculosis were notified to the Medical Officer of Health, and of this number 980, or 96·9 per cent, were examined at the Centre. There were also 198 cases of non-pulmonary tuberculosis notified during the year, of which 138, or 69·6 per cent, were examined at the Centre.

The number of patients on the Dispensary Register on 1st January was 5,082 ; the number of persons transferred to other areas during the year and the cases “ lost sight of ” numbered 330 ; the number transferred to us from other areas and the “ lost sight of ” cases returned was 129.

At the end of the year 983 insured persons were receiving domiciliary treatment at the recommendation of the medical staff.

Treatment Recommended

In the following table are set out treatments recommended for patients examined at the Anti-Tuberculosis Centre during the year :

	<i>First Examinations.</i>			<i>Re-examinations.</i>	
	<i>Newly Notified.</i>	<i>Contacts.</i>	<i>Suspects.</i>	<i>Old Cases.</i>	<i>Contacts or Suspects.</i>
Sanatorium treatment	532	65	299	352	6
Dispensary treatment.....	5	—	1	15	—
Supervision	17	1	12	1,034	3
Out-patient light treatment	13	—	7	14	—
Domiciliary treatment	105	8	51	1,704	1
No treatment required	180	1,510	1,871	243	1,112
TOTALS	852	1,584	2,241	3,362	1,122

The table above shows that a large percentage of new cases notified during the year received a primary period of sanatorium treatment. This is an advantage to the patient, inasmuch as his physical condition is benefited and he acquires practical experience of the treatment which it would be to his advantage to carry out in a modified form in his own home afterwards.

Classification of patients according to group of disease

The following tables show the classification of the patients examined according to group of disease. Adults and children are shown separately.

ADULTS

	<i>First Examinations.</i>			<i>Re-examinations.</i>	
	<i>Newly Notified.</i>	<i>Contacts.</i>	<i>Suspects.</i>	<i>Old Cases.</i>	<i>Contacts or Suspects.</i>
Group I	64	16	60	533	1
Group II	276	22	167	1597	2
Group III	246	8	98	569	1
Group IV	52	—	22	176	—
No treatment required	151	716	1,477	29	239
TOTALS	789	762	1,824	2,904	243

CHILDREN

	<i>First Examinations.</i>			<i>Re-examinations.</i>	
	<i>Newly Notified.</i>	<i>Contacts.</i>	<i>Suspects.</i>	<i>Old Cases.</i>	<i>Contacts or Suspects.</i>
Group I	9	22	13	253	8
Group II	5	—	4	71	1
Group III	2	2	—	5	—
Group IV	20	5	11	108	—
No treatment required	27	793	389	21	870
TOTALS	63	822	417	458	879

In certain instances patients included in the various groups are suffering from other forms of tuberculosis in addition to pulmonary, but for convenience are classified as pulmonary cases when that type of the disease is present in association with other types.

In the succeeding tables are set out briefly some details of those who were referred to us as contacts and suspects. Amongst those classified here as suspects are many who had been living in contact with known cases of tuberculosis, and who were, therefore, possibly referred to us mainly for this reason.

The contacts have been divided into various groups, and they have also been arranged to show the numbers in each group that came from homes where there had been contact with patients suffering from tuberculosis associated with a positive or negative sputum.

SUSPECTS EXAMINED DURING THE YEAR 1938

Definitely tuberculous	370
No signs of tuberculosis	1,871
TOTAL	2,241

CONTACTS EXAMINED DURING THE YEAR 1938

<i>Ages.</i>	<i>Found TO BE suffering from Tuberculosis.</i>	<i>Found NOT TO BE suffering from Tuberculosis.</i>	<i>Totals.</i>
<i>0 to 5 years.</i>			
Contacts to patients with sputum containing tubercle bacilli	10 or 5.9%	159 or 94.1%	169
Contacts to patients with negative sputum	7 or 5.2%	128 or 94.8%	135
<i>6 to 10 years.</i>			
Contacts to patients with sputum containing tubercle bacilli	5 or 2.9%	168 or 97.1%	173
Contacts to patients with negative sputum	4 or 3%	129 or 97%	133
<i>11 to 15 years.</i>			
Contacts to patients with sputum containing tubercle bacilli	3 or 2.1%	141 or 97.9%	144
Contacts to patients with negative sputum	1 or 1%	94 or 99.0%	95
<i>16 years and over.</i>			
Contacts to patients with sputum containing tubercle bacilli	31 or 6.6%	441 or 93.4%	472
Contacts to patients with negative sputum	15 or 5.7%	248 or 94.3%	263
GRAND TOTALS.....	76 or 4.8%	1,508 or 95.2%	1,584

During the eight years 1931 to 1938, inclusive, 8,527 contacts were examined; 5,319 of these were contacts to patients whose sputum was known to contain tubercle bacilli, the remaining 3,208 were contacts to patients in whose sputum tubercle bacilli were not demonstrated, or to patients from whom sputum could not be obtained. From birth to fifteen years of age the contacts are classified in hemi-decades. It will be seen that in every age period the largest numbers found to be suffering from tuberculosis were detected amongst those who were contacts to positive sputum patients, and the largest percentage of contacts with definite disease was found in the first and second hemi-decades under fifteen

years. Over fifteen years of age the percentage of definite cases of tuberculosis detected amongst contacts is greater than in any of the earlier hemi-decades, whether association occurred with positive or negative sputum patients. These details are shown in the following table :

CONTACTS EXAMINED DURING THE YEARS 1931 to 1938, INCLUSIVE

<i>Ages.</i>	<i>Found TO BE suffering from Tuberculosis.</i>	<i>Found NOT TO BE suffering from Tuberculosis.</i>	<i>Totals.</i>
<p>0 to 5 years.</p> <p>Contacts to patients with sputum containing tubercle bacilli</p> <p>Contacts to patients with negative sputum</p>	<p>84 or 6.5%</p> <p>35 or 3.9%</p>	<p>1212 or 93.5%</p> <p>867 or 96.1%</p>	<p>1,296</p> <p>902</p>
<p>6 to 10 years.</p> <p>Contacts to patients with sputum containing tubercle bacilli</p> <p>Contacts to patients with negative sputum</p>	<p>51 or 4.7%</p> <p>22 or 3.0%</p>	<p>1028 or 95.2%</p> <p>735 or 97.0%</p>	<p>1,079</p> <p>757</p>
<p>11 to 15 years.</p> <p>Contacts to patients with sputum containing tubercle bacilli</p> <p>Contacts to patients with negative sputum</p>	<p>32 or 3.4%</p> <p>12 or 2.6%</p>	<p>894 or 96.6%</p> <p>457 or 97.4%</p>	<p>926</p> <p>469</p>
<p>16 years and over.</p> <p>Contacts to patients with sputum containing tubercle bacilli</p> <p>Contacts to patients with negative sputum</p>	<p>132 or 6.5%</p> <p>62 or 5.8%</p>	<p>1886 or 93.5%</p> <p>1018 or 94.2%</p>	<p>2,018</p> <p>1,080</p>
GRAND TOTALS.....	430 or 5.0%	8097 or 95.0%	8,527

A number of child contacts who presented no definite evidence of active tuberculosis after a primary investigation are given supervision for a number of years, including periodic examinations, the extent and frequency of which are determined by circumstances depending upon social conditions, exposure to infection, and the occurrence of such inter-current diseases as measles, whooping cough, broncho-pneumonia,

pleurisy and phlyctenular conjunctivitis. Re-examination may be undertaken at longer intervals than would otherwise be desirable where there is good liaison, including regular exchange of information between the Tuberculosis Department, the Infant Welfare and Education Departments, and where there is satisfactory co-operation with the general practitioner.

The initial investigation of contacts must be both comprehensive and intensive if it is to be effective ; the entire household should be the unit for primary investigation, and initial examinations must never be incomplete nor undertaken in a haphazard way as much will depend upon the thoroughness of the investigation, the correct assessment of findings, and the adoption of measures designed to protect those exposed to continuous and massive doses of infection.

Our figures for contact examinations certainly show the necessity for this phase of dispensary work, and they further suggest that tuberculosis is more frequently discovered amongst child contacts to positive sputum patients than amongst those in contact with negative sputum patients.

The investigation of contacts at the clinic has included a careful physical and radioscopic examination, followed in many instances by an X-ray film. Frequently a few weeks spent in an observation bed at the sanatorium have also been devoted to investigation. An intradermal tuberculin test is applied to practically all children under ten years of age examined as contacts, and to older patients when necessary.

During the year 1,031 patients were tested with tuberculin, the Mantoux method being used, and in a large majority of cases the test was commenced with an injection of 0.1 m.g. of O.T.

In the subsequent table are given some details about the intradermal tests undertaken during the years 1935 to 1938, which numbered 3,691. 1,255 were made on children aged 0 to 5 years, and of these 47.4 per cent were positive ; 1,734 tests made on children between the ages of 6 to 10 years, of which 42.9 per cent were positive ; 702 were undertaken on persons of eleven years of age and over, amongst which 56.4 per cent were positive.

INTRADERMAL TESTS, 1935-1938

<i>Ages.</i>		<i>Males.</i>	<i>Females.</i>	<i>Totals.</i>
0 to 5 years :	Positive.....	291	304	595
	Negative	375	285	660
6 to 10 years :	Positive.....	396	348	744
	Negative	541	449	990
11 years and over :	Positive.....	201	195	396
	Negative	154	152	306

FÆCES EXAMINED

If patients in the sanatorium, either for treatment or diagnosis, could produce no sputum, or where sputum was persistently negative for tubercle bacilli, fæces were examined for acid and alcohol fast bacilli.

In a series of 5,409 examinations of fæces for tubercle bacilli from patients with no sputum, or a sputum that was persistently negative for tubercle bacilli, 160, or 2·9 per cent, were found to contain acid and alcohol fast bacilli. In sixty-seven of these "no sputum" persisted, in seventy-five the sputum eventually became positive, and in eighteen instances the sputum remained persistently negative.

Sputum was examined at frequent intervals by a variety of methods, including those of Ellerman and Erlandsen, and Lowenstein-Jansen. In no instances were fæces examined before the patient had been in sanatorium for at least one week, during which only pasteurised milk was consumed.

GASTRIC LAVAGES

Sputum for examination is not always easy to obtain from children under ten years of age, as they rarely expectorate. To meet this difficulty the contents of a stomach lavage, taken first thing in the morning, from a fasting stomach, were investigated for acid fast bacilli in a number of instances; whether or not these bacilli were found on smear examination alone, some of the centrifuged deposit was injected into a guinea-pig.

Over a period of eight years we have examined 793 stomach washes for acid fast bacilli, of which 83, or 10·4 per cent, gave a positive result. Only nine of these were positive on smear examination, the remaining seventy-four were discovered as the result of a guinea-pig injection.

POSITIVE FINDINGS

<i>Ages.</i>	<i>Contact.</i>	<i>Suspect.</i>	<i>Notified.</i>	<i>Totals.</i>
0-3 years	12	8	12	32
4-6 years	14	9	7	30
7-10 years	11	5	5	21
TOTALS	37	22	24	83

Three of the eighty-three children giving a positive stomach-wash have since commenced to expectorate, and their sputum is now positive for tubercle bacilli.

During the year, examination of a gastric lavage was undertaken in connection with twenty-five child patients whose findings were originally positive for tubercle bacilli. In twenty-four instances the result was negative; in only one case was a positive finding persistent. These patients had all been originally classified as cases of epituberculosis.

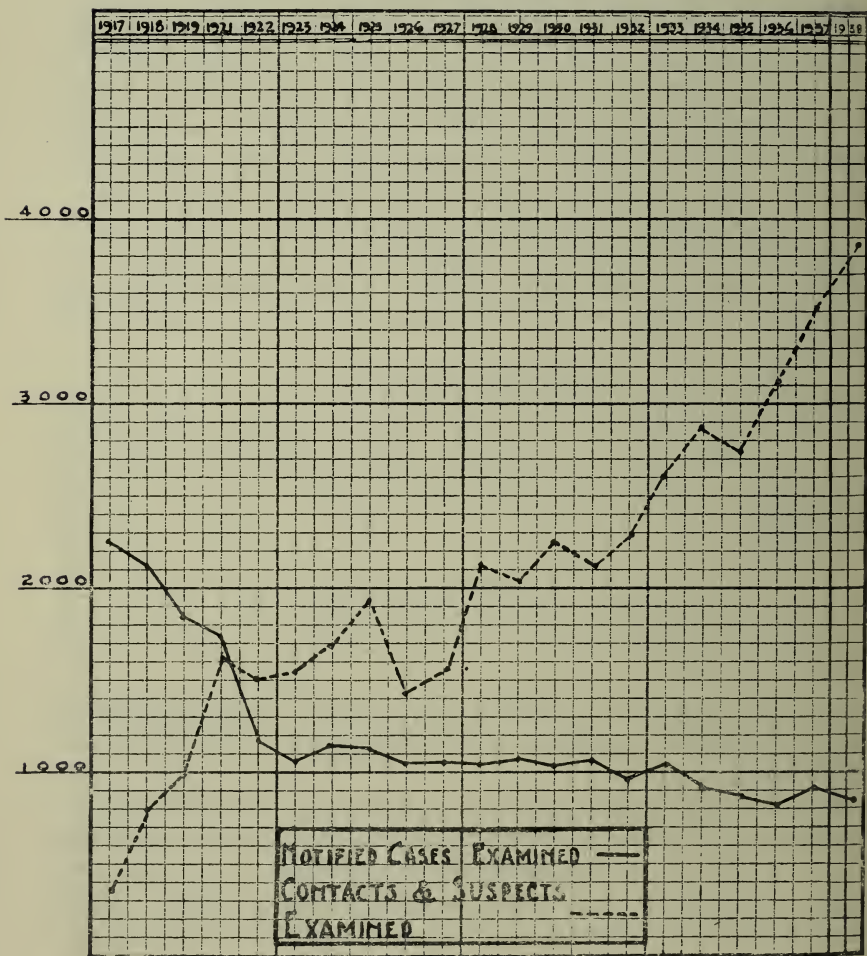
Amongst the eighty-three patients with a positive gastric lavage, six were classified as cases of the adult type pulmonary tubercle, four as cases of miliary tuberculosis, four as pleuritis, five as tuberculous broncho-pneumonia, sixty-two as epituberculosis,

Nine of these children have died, the majority being amongst those classified as cases of adult type of pulmonary tubercle and tuberculous broncho-pneumonia.

“ CONTACTS,” “ SUSPECTS ” AND “ NOTIFIED CASES.”

In the graph below are shown the number of “ contacts ” and “ suspects,” and “ notified cases ” examined over a series of years.

PULMONARY TUBERCULOSIS



The work of the Tuberculosis Dispensary is greatly facilitated when patients in the General Hospitals (voluntary and municipal) who are suffering from tuberculosis, are advised to apply to us for further treatment, and for the examination of their families as "contacts."

Unless the patient realises that he is suffering from tuberculosis when he leaves the hospital he is sometimes disinclined to accept further treatment in a sanatorium, because he imagines the time spent in the hospital is all the treatment he is likely to require.

During the past year 364 notifications of tuberculosis were received from the municipal and public assistance hospitals, having an aggregate number of beds equivalent to 4,412. Of these patients ninety-six were acutely ill and could not be examined for a variety of reasons; 268 were examined, and of this number twenty-five refused treatment and 187 were admitted to sanatoria.

Family History

A survey of the family history has been made of patients examined who were definitely tuberculous, and the results are shown in the following tables :

ADULTS.

	<i>Newly Notified.</i>	<i>Suspects.</i>	<i>Contacts with Definite Disease.</i>
No family history of tuberculosis . . .	553 or 86·6%	276 or 80·2%	—
Father suffering or suffered from tuberculosis	13 or 15·3%	12 or 17·7%	4 or 8·7%
Mother suffering or suffered from tuberculosis	13 or 15·3%	8 or 11·7%	4 or 8·7%
Brother or sister	27 or 31·8%	20 or 29·4%	12 or 26·1%
One relative other than above, or intimate friend	20 or 23·5%	17 or 25·0%	18 or 39·1%
Two or more relatives	12 or 14·1%	11 or 16·2%	8 or 17·4%
TOTAL	85	68	46

CHILDREN

	<i>Newly Notified.</i>	<i>Suspects.</i>	<i>Contacts with Definite Disease.</i>
No family history of tuberculosis..	25 or 71·4%	23 or 82·2%	—
Father suffering or suffered from tuberculosis	5 or 50·0%	2 or 40·0%	15 or 57·7%
Mother suffering or suffered from tuberculosis	1 or 10·0%	1 or 20·0%	8 or 30·8%
Brother or sister	2 or 20·0%	—	3 or 11·5%
One relative other than above, school-fellow or intimate friend..	1 or 10·0%	1 or 20·0%	—
Two or more relatives	1 or 10·0%	1 or 20·0%	—
TOTAL.....	10	5	26

Dental Treatment

The part-time services of a dental surgeon are utilised at the Centre for the necessary treatment of our patients. The treatment is conservative in type, and consists mainly of extractions, fillings and scalings. Patients who wish to provide their own dentures can do so under conditions advantageous to themselves by arrangement with the dental surgeon. During the year there were 424 extractions, eight fillings, eleven scalings, and dentures were supplied in twenty-two instances. The condition of the teeth and gums of most of our patients seen during the year, so far as dental caries, masticatory power, and the state of the gums were concerned, is shown in the following table :

CONDITION OF TEETH AND GUMS

<i>Number of teeth with infected pulp chambers.</i>			<i>Masticatory power in molars and bicuspid.</i>		
<i>None.</i>	<i>1 to 4.</i>	<i>More than 4.</i>	<i>6 or more.</i>	<i>Less than 6.</i>	<i>None.</i>
2,845	3,092	365	4,980	829	520

STATE OF GUMS

<i>Healthy.</i>	<i>Gingivitis.</i>	<i>Pyorrhæa.</i>
5,517	403	414

Laboratory Work

A very large number of sputum examinations is undertaken during the year on behalf of persons who are referred for an opinion. If the first examination gives a negative result, subsequent and repeated specimens are examined.

As soon as a patient is referred for examination a sputum outfit, with instructions and a request for its early return, is posted. Amongst the new adult patients examined for the first time during the year, in whom a definite diagnosis of pulmonary tuberculosis was made—i.e., 957—there were 524 or 54·7 per cent who presented tubercle bacilli in their sputum. Amongst the total number of children primarily examined in whom a definite diagnosis of pulmonary tuberculosis was made—i.e., fifty-seven—there were five, or 8·8 per cent, who presented tubercle bacilli in their sputum, gastric contents, or fæces.

The difficulty of obtaining sputum from children, even when it exists, is recognised, so all children under ten years of age whether admitted to sanatorium for observation or treatment, have the fæces and gastric lavage examined for acid fast bacilli; they are also submitted to a Mantoux tuberculin test. All adult patients who enter the observation pavilions have a blood sedimentation test undertaken and have the fæces examined for acid fast bacilli when sputum is persistently negative or cannot be procured. A blood sedimentation test is also undertaken periodically for those being treated by artificial pneumothorax.

At the Centre during the year 5,092 specimens of sputum were examined; at Yardley Green Road Sanatorium, 6,004 specimens of sputum were examined during the year; Romsley Hill Sanatorium records show that 1,905 specimens of sputum were examined; at West Heath Sanatorium 1,258 specimens were examined; and at Salterley Grange Sanatorium 875 specimens of sputum were examined during the year.

Completed Cases

During the year 2,052 patients completed a course of treatment, or supervision, etc., at the Centre, of whom 1,703 were adults and 349 were children.

During the year under review we examined and reported upon 263 patients who were referred to us by the Regional Medical Officer's Department.

In addition, we examined for the Police Department 197 recruits to ascertain if any definite evidence of tuberculosis was present.

In the next table the working capacity at the commencement and at the end of a completed period of treatment is given for those patients who were examined during the year. The group of disease quoted was determined at the first examination.

WORKING CAPACITY OF PATIENTS ATTENDING CENTRE

	Group I.		Group II.		Group III.		Group IV.	
	Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.
Unimpaired working capacity becoming impaired	9	2	—	—	—	—	3	6
Unimpaired working capacity persisting	—	—	—	—	—	—	—	—
Impaired working capacity becoming unimpaired	153	125	156	29	17	1	54	43
Impaired capacity becoming totally incapacitated	12	1	42	—	15	—	1	—
Impaired capacity persisting	144	58	517	11	109	3	34	21
Total incapacity becoming impaired	30	8	102	4	99	—	19	5
Total incapacity becoming unimpaired	22	12	45	9	17	—	16	8
Total incapacity persisting	4	3	27	—	52	—	4	—
TOTALS	374	209	889	53	309	4	131	83

In the following tables are set out as briefly as possible the main points in connection with an investigation undertaken to ascertain the conditions of those past patients who received treatment at the Centre in the years 1913-1938 inclusive.

PRESENT CONDITION OF PATIENTS TREATED IN PREVIOUS YEARS SHOWING CONDITION OF THOSE WHO WERE TREATED FOR
PULMONARY TUBERCULOSIS.

Condition at the time of the last record made during the year to which the return relates.	Previous to 1928.						1928.						1929.						1930.						1931.						1932.					
	Class T.B. plus.			Class T.B. plus.			Class T.B. plus.			Class T.B. plus.			Class T.B. plus.			Class T.B. plus.			Class T.B. plus.			Class T.B. plus.			Class T.B. plus.			Class T.B. plus.			Class T.B. plus.					
	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Total (Class T.B. plus).	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Total (Class T.B. plus).	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Total (Class T.B. plus).	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Total (Class T.B. plus).	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Total (Class T.B. plus).	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Total (Class T.B. plus).						
Disease arrested { Adults : M. { F. { Children	81	15	41	11	67	11	—	2	—	2	7	3	1	—	18	11	2	6	1	9	5	3	7	—	10	21	1	3	2	6						
	63	3	13	5	21	8	1	1	3	6	6	5	2	—	7	8	—	5	1	6	13	5	4	1	10	18	1	6	1	8						
	93	—	—	1	2	5	—	—	—	6	—	—	2	—	2	7	1	1	—	2	23	—	—	—	1	15	2	1	—	3						
Disease not arrested { Adults : M. { F. { Children	39	14	58	38	110	6	5	23	1	29	12	7	4	2	13	19	7	35	2	44	20	5	33	7	45	27	4	46	6	56						
	49	5	36	36	77	5	2	18	1	21	10	6	15	3	24	15	7	17	1	25	26	4	22	5	31	27	4	26	2	32						
	30	1	4	1	6	9	—	—	—	—	9	1	1	—	2	8	—	1	—	1	27	3	1	—	4	17	1	—	—	1						
Condition not ascertained during the year	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—						
Total on Dispensary Register at 31st December	355	38	153	92	283	44	8	44	3	55	50	22	39	5	66	68	17	65	5	87	114	20	68	13	101	125	13	82	11	106						
Discharged as recovered { Adults : M. { F. { Children	1750	190	290	108	588	27	4	3	—	7	36	8	7	1	16	28	5	5	1	11	23	5	5	—	10	14	—	4	—	4						
	1956	129	189	66	384	21	1	8	3	12	24	5	5	2	12	27	1	3	—	4	23	6	3	1	10	16	2	—	—	2						
	2201	36	28	17	81	39	—	1	—	1	56	1	—	—	1	27	—	—	—	—	33	—	—	—	—	13	1	—	—	1						
Lost sight of, or otherwise removed from Dispensary Register	1958	194	311	209	714	59	12	20	10	42	65	8	40	6	54	64	9	28	13	50	61	9	39	9	57	57	10	36	12	58						
Dead { Adults : M. { F. { Children	1007	192	1123	1832	3147	48	17	176	163	356	52	25	180	174	379	51	12	183	149	344	50	6	176	176	358	44	13	135	170	318						
	795	78	505	980	1563	31	11	112	104	227	38	16	115	110	241	50	11	104	110	225	44	12	98	129	239	38	18	105	120	243						
	206	14	15	60	89	7	1	4	8	13	8	1	2	5	8	8	1	4	6	11	13	—	5	7	12	6	1	5	8	14						
Total written off Dispensary Register	9873	833	2461	3272	6566	232	46	324	288	658	279	64	349	298	711	255	39	327	279	645	247	38	326	322	686	188	45	285	310	640						
GRAND TOTALS	10228	871	2614	3364	6849	276	54	368	291	713	329	86	338	303	777	323	56	392	284	732	361	58	394	335	787	313	58	367	321	746						
Not now on Dispensary Register and reasons for removal therefrom																																				

Not now on Dispensary Register and reasons for removal therefrom. Register on 31st December. Remaining on Dispensary.

PRESENT CONDITION OF PATIENTS TREATED IN PREVIOUS YEARS SHOWING CONDITION OF THOSE WHO WERE TREATED FOR PULMONARY TUBERCULOSIS—*continued*

Condition at the time of the last record made during the year to which the return relates.	1933.				1934.				1935.				1936.				1937.				1938.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Class T.B. minus.	Group 1.	Group 2.	Group 3.

SUMMARY

(1) Not less than 96·9 per cent of the total number notified in the city as suffering from pulmonary tuberculosis were examined at the Centre.

(2) The number of patients who were visited and examined in their own homes by the medical staff was 1,237. This figure represented an increase when compared with that of the previous year.

(3) During the year 8,104 screen examinations were made in the radiological section, and films were taken in 3,076 cases. There was an increase both in the number of screen examinations and in the number of films taken, when compared with the figures for the year 1937.

(4) Amongst new patients suffering from pulmonary tuberculosis examined during the year, 54·7 per cent of the adults presented tubercle bacilli in their sputum, and 8·8 per cent of the children.

(5) Of the 1,014 primary cases suffering from pulmonary tuberculosis examined during the year 18·2 per cent were classified as Group I ; 46·7 per cent were classified as Group II ; and 35·1 per cent as Group III.

(6) Of the patients treated during the periods 1913-1938, some 14,664 presented tubercle bacilli in their sputum. Of this number 23·2 per cent are known to be alive ; 68·4 per cent are known to be dead, and 8·4 per cent have been lost sight of.

(7) During the same period 13,719 patients whose sputum contained no tubercle bacilli were treated. Of this number 60·6 per cent are known to be alive, 20·9 per cent are known to be dead, and 18·5 per cent have been lost sight of.

(8) During this period (1913-1938) 1,842 patients suffering from non-pulmonary tuberculosis were treated. Of this number 72·3 per cent are known to be still alive, 13·7 per cent are known to be dead, and 14 per cent have been lost sight of.

Sanatoria

Total numbers treated in Sanatoria and duration of stay

During the year 1938 there were 1,595 patients discharged from all the sanatoria. Included in this number are seventy-four patients suffering from non-pulmonary tuberculosis who were treated in institutions subsidised by the Public Health Department. Of the 1,595 patients, 903 were adult males, 497 were adult females, and 195 were children.

The average duration of stay was 125·2 days for adult males, 145·7 for adult females, 253·2 days for male children, and 327·2 days for female children, excluding those admitted for observation and who, proving negative, remained only for a short time, and excluding those " hospital " cases with advanced disease who died within a few days of their admission.

Occupational Therapy in Sanatoria

In the Municipal Sanatoria attention is paid to the question of occupational therapy with the object of interesting and employing suitably a certain number of patients whose condition admits of it. The fitness of the patient to engage in occupational therapy is always judged by the medical officer, who has the patient under constant supervision. The occupation to be followed and the number of hours to be devoted to it are both decided upon by the doctor after careful consideration. At Salterley Grange Sanatorium the physical condition of the patients is usually so good, and their disease so early, that temporary employment suitable to their needs can be found in the gardens and upon the estate. At West Heath and Yardley Green Road Sanatoria facilities for occupational therapy have existed for many years. At West Heath the patients are employed in basket making. At Romsley Hill Sanatorium patients are also instructed in basket and leather work.

At Yardley Green Road Sanatorium patients are instructed in basket making, leather work of different kinds, and in mat making, etc.

The children attending the Sanatorium School at Yardley Green Road Sanatorium are taught various forms of handicraft, including leather and pewter work, raffia work, basket making, etc. Many children who are confined to bed are also taught handicrafts. Schooling at Yardley Green Road Sanatorium is provided for suitable children who are ambulant and immobilised, three school teachers being employed.

Patients admitted to Sanatoria for observation and investigation

The beds utilised for the purpose of observation are at Yardley Green Road Sanatorium. Observation patients are those who, after careful and repeated examinations at the Centre, are found to be indefinite, either as to the absence or presence of tuberculosis or as to its activity or otherwise when present, and are usually admitted for a period varying from four to six weeks. Of the 1,521 patients discharged from the Sanatoria, 184, or 12·0 per cent, were admitted primarily for observation to Yardley Green Road Sanatorium. The medical findings are shown in the following table :

<i>Diagnosis on discharge from observation.</i>	<i>For Pulmonary Tuberculosis.</i>						<i>For Non-pulmonary Tuberculosis.</i>						<i>Totals.</i>		
	<i>Stay under 4 weeks.</i>			<i>Stay over 4 weeks.</i>			<i>Stay under 4 weeks.</i>			<i>Stay over 4 weeks.</i>			<i>M.</i>	<i>F.</i>	<i>Ch.</i>
	<i>M.</i>	<i>F.</i>	<i>Ch.</i>	<i>M.</i>	<i>F.</i>	<i>Ch.</i>	<i>M.</i>	<i>F.</i>	<i>Ch.</i>	<i>M.</i>	<i>F.</i>	<i>Ch.</i>			
Tuberculous.....	2	3	2	13	11	30	—	—	—	1	1	2	16	15	34
Non-tuberculous	1	2	3	42	17	40	—	—	—	1	1	4	44	20	47
Doubtful	1	3	3	—	—	—	—	—	—	—	1	—	1	4	3
TOTALS	4	8	8	55	28	70	—	—	—	2	3	6	61	39	84

RESULTS OF TREATMENT OF PATIENTS DISCHARGED FROM RESIDENTIAL INSTITUTIONS DURING THE YEAR 1938.

Classification on admission to the Institution.	Condition at time of discharge.	Duration of Residential Treatment in the Institution.															Grand Totals.
		Under 3 months but exceeding 28 days.			3-6 months.			6-12 months.			More than 12 months.			Totals.			
		M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	
PULMONARY TUBERCULOSIS	CLASS T.B. MINUS:																
	Quiescent	13	10	5	18	4	3	—	3	3	8	—	8	31	17	19	67
	Not quiescent	81	31	19	34	31	10	8	8	12	9	2	3	125	73	50	248
	Died in Institution	7	3	2	2	2	1	3	1	—	—	1	—	13	6	3	22
	CLASS T.B. PLUS.																
PULMONARY TUBERCULOSIS	CLASS T.B. GROUP I:																
	Quiescent	10	7	—	3	7	—	—	1	—	—	—	—	14	15	—	—
	Not quiescent	1	1	—	—	—	—	—	—	—	—	1	—	2	1	—	29
	Died in Institution	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3
	CLASS T.B. PLUS.																
PULMONARY TUBERCULOSIS	CLASS T.B. GROUP II:																
	Quiescent	128	42	—	75	61	—	—	30	—	—	—	—	238	137	—	375
	Not quiescent	9	7	—	5	4	—	—	5	3	—	—	—	27	14	1	42
	Died in Institution	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	CLASS T.B. PLUS.																
PULMONARY TUBERCULOSIS	CLASS T.B. GROUP III:																
	Quiescent	121	50	—	60	27	—	—	18	14	—	—	—	202	94	—	296
	Not quiescent	47	17	1	19	19	—	8	9	—	2	5	—	76	50	3	129
	Died in Institution	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Totals (Pulmonary)	417	168	27	216	155	14	73	69	15	22	15	20	728	407	76	1211
NON-PULMONARY TUBERCULOSIS	BONES AND JOINTS:																
	Quiescent	—	2	2	3	2	2	3	1	5	4	2	5	10	5	14	29
	Not quiescent	6	13	1	3	3	4	2	4	7	3	2	—	14	11	29	54
	Died in Institution	—	1	—	1	—	—	1	—	—	—	—	—	2	3	—	5
	ABDOMINAL:																
NON-PULMONARY TUBERCULOSIS	Quiescent	—	1	—	1	1	—	—	—	1	—	—	—	1	1	1	3
	Not quiescent	2	6	—	—	—	1	—	—	—	—	—	—	3	7	2	12
	Died in Institution	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	OTHER ORGANS:																
	Quiescent	—	—	—	1	1	—	—	—	1	2	—	—	1	3	1	2
NON-PULMONARY TUBERCULOSIS	Not quiescent	5	1	—	1	—	—	7	—	1	—	—	—	15	20	2	20
	Died in Institution	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	1
	PERIPHERAL GLANDS:																
	Quiescent	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Not quiescent	2	—	—	1	2	1	—	—	—	—	—	—	3	2	8	13
NON-PULMONARY TUBERCULOSIS	Died in Institution	—	—	—	—	—	—	—	—	1	—	—	—	—	1	1	1
	Totals (non-Pulmonary)	15	11	23	12	9	9	13	5	16	9	7	11	49	32	59	140

NOTE.—“ Quiescent ” disease indicates that there are no symptoms of tuberculosis, and no signs of tuberculous disease except such as are compatible with a completely healed lesion, and in which sputum, if present, is free from tubercle bacilli.

Classification of patients' disease

In this table the patients are scheduled according to the classification of the Ministry of Health, as follows :

GROUP I	Cases with slight constitutional disturbance, if any, e.g., there should not be marked acceleration of pulse nor elevation of temperature, except of very transient duration ; gastro-intestinal disturbance or emaciation, if present, should not be excessive. The obvious physical signs should be of very limited extent, as follows : Either present in one lobe only, and in the case of an apical lesion of one upper lobe not extending below the second rib in front and not exceeding an equivalent area in any one lobe ; or where these physical signs are present in more than one lobe, they should be limited to the apices of the upper lobes and should not extend below the clavicle and the spine of the scapula. No complication (tuberculous or otherwise) of prognostic gravity should be present. A small area of dry pleurisy should not exclude a case from this group.
GROUP III....	Cases with profound systemic disturbance or constitutional deterioration ; with marked impairment of function either local or general, and with little or no prospect of recovery. All cases with grave complications, whether tuberculous or not, should be classified in this group—e.g., diabetes, tuberculosis of larynx or intestines, etc.
GROUP II	All cases which cannot be placed in Groups I or III. Patients suffering from non-pulmonary tuberculosis are classified according to the site of the lesion and are placed under Group IV.

Sputum results after Sanatorium treatment

Of the 1,264 adult patients discharged from the Sanatoria suffering from pulmonary tuberculosis during the year, 969, or 76.6 per cent, presented tubercle bacilli in their sputum whilst in the Sanatoria.

<i>Sanatoria.</i>	No sputum persist- ing.	No sputum becom- ing T.B. -	No sputum becom- ing T.B. +	T.B. - persist- ing.	T.B. - becom- ing T.B. +	T.B. - becom- ing No sputum.	T.B. + persist- ing.	T.B. + becom- ing T.B. -	T.B. + becom- ing No sputum.
Yardley Green Road Sanatorium	60	2	—	84	1	21	340	14	22
Romsley Hill Sanatorium	14	1	—	29	—	8	184	30	18
Salterley Grange Sanatorium	31	3	1	36	—	14	47	17	14
West Heath Sanatorium	21	—	—	12	—	1	267	2	12
TOTALS	126	6	1	161	1	44	838	63	66

In the following table the occupation of both male and female patients are shown :

	<i>Males.</i>	<i>Females.</i>
Outdoor occupations	56	1
Domestic occupations	11	188
Sedentary occupations	56	51
Commercial occupations	29	20
Engineering occupations	137	67
Metal trades	219	47
Building trades	59	2
Other trades	278	85
TOTALS.....	845	461

Gain or loss in weight

Amongst a total of 1,306 patients discharged from Sanatoria after treatment, many of whom were advanced hospital cases admitted for the purpose of prophylaxis, 138, or 10·0 per cent, remained stationary, and 889, or 68·0 per cent, gained weight in amounts varying from 1-lb. to 40-lbs.

Working Capacity

The working capacity of patients is shown in the following tables :

	<i>Adult Males.</i>	<i>Adult Females.</i>	<i>Children.</i>	<i>Total.</i>
Unimpaired capacity for work becoming impaired	—	—	1	1
Impaired working capacity becoming unimpaired	18	5	14	37
Impaired capacity for work persisting ..	407	206	47	660
Impaired capacity for work becoming totally incapacitated.....	27	17	1	45
Total incapacity for work becoming impaired	134	84	15	233
Total incapacity for work becoming unimpaired	4	—	4	8
Total incapacity for work persisting ..	63	39	2	104
Died in sanatoria	192	110	12	314
TOTALS.....	845	461	96	1,402

SUMMARY

(1) The average duration of patients' stay for all Sanatoria was 125·2 days for adult males, 145·7 days for adult females, 253·8 days for male children, and 327·2 days for female children.

(2) Of the patients from all Sanatoria no less than 12·0 per cent passed through the observation beds at Yardley Green Road Sanatorium.

(3) 42·2 per cent of the patients were in Group III, 41·3 per cent were in Group II, 12·0 per cent were in Group I, and 4·5 per cent were in Group IV.

(4) There were 76·6 per cent of all patients discharged from Sanatoria who presented tubercle bacilli in their sputum whilst in the Sanatorium.

(5) 889, or 68·0 per cent, of all patients discharged from Sanatoria gained weight in amounts varying from 1-lb. to 40-lbs.

(6) Some 418, or 51·4 per cent, of the deaths from tuberculosis occurred in "hospital" beds in various Sanatoria and hospitals controlled by the Public Health Committee.

Treatment in the Light Clinic

Patients completing treatment during 1938

The total number of patients completing a satisfactory course of treatment during the year 1938 was fifty.

The number includes nineteen adult males, eighteen adult females, seven male children, and six female children.

These completed cases consisted of :

	<i>Adult Males.</i>	<i>Adult Females.</i>	<i>Male Children.</i>	<i>Female Children.</i>
Tuberculous bones and joints ..	5	3	1	—
Tuberculosis of abdomen	—	3	1	1
Cervical adenitis	6	10	5	5
Lupus	—	—	—	—
Other organs	8	2	—	—
TOTALS	19	18	7	6

Patients continuing treatment

On the 31st December, 1938, 152 patients were continuing treatment in the light clinics and many showed an improvement in their condition.

VENEREAL DISEASES

The City Council maintain three centres for the treatment of venereal diseases, one for men, women and children at the Birmingham General Hospital; one for children at the Children's Hospital; and one for mothers and young children in the same building as that occupied as a maternity and child welfare centre in Lancaster Street. In addition, cases of venereal disease come under treatment at the venereal diseases clinic maintained in connection with the women's venereal diseases ward in the Birmingham Infirmary.

The main clinic, at the General Hospital, is in a building specially built for the purpose, and has attached to it wards for the treatment of early infections, of bed-ridden and of maternity cases.

The clinic at Lancaster Street, opened in 1935, also specially designed is the upper floor of a child welfare centre, receives patients mainly from child welfare centres, but also from doctors, from a women's remand home, etc.

At these various centres 346 new cases of syphilis, 955 of gonorrhœa and 2,423 cases suffering from conditions other than venereal disease were seen in 1938 as follows:

	<i>New Cases.</i>			<i>Other Conditions.</i>
	<i>Syphilis.</i>	<i>Soft Chancre.</i>	<i>Gonorrhœa.</i>	
General Hospital.....	274	—	910	1,447
Children's Hospital.....	7	—	2	54
Lancaster Street	51	—	23	897
Birmingham Infirmary	14	—	20	25
TOTAL	346	—	955	2,423

The new cases coming under treatment for the first time, and not having had previous treatment at other Centres, are indicated in the following table. It should be noted that cases who, attending our clinics for the first time, have been treated at clinics elsewhere, have been excluded for each year :

	<i>Syphilis.</i>	<i>Soft Chancre.</i>	<i>Gonorrhœa.</i>	<i>Other Conditions.</i>
1926....	537	2	848	729
1927....	622	4	952	861
1928....	592	10	1,146	920
1929....	523	9	1,200	803
1930....	541	14	1,257	1,076
1931....	504	1	985	1,082
1932....	512	10	1,066	1,109
1933....	454	19	944	1,248
1934....	*511	*25	*998	*1,425
1935....	428	20	882	1,887
1936....	353	7	971	1,988
1937....	326	1	1,011	2,233
1938....	346	—	955	2,423

*These figures include those for the Birmingham Infirmary for the first time.

The total attendances for the last ten years were :

1928.....	78,261	1934.....	*110,716
1929.....	78,098	1935.....	121,788
1930.....	88,589	1936.....	124,387
1931.....	93,280	1937.....	125,408
1932.....	100,313	1938.....	131,611
1933.....	103,925		

*These figures include those from Birmingham Infirmary for the first time.

Only general conclusions can be drawn from these figures : that there has been no great variation, upwards or downwards, in the number of new cases of syphilis and of gonorrhœa coming up for treatment, but that the clinics continue to function ever more effectively, as judged by the growing attendances and by the reduction in the number of patients ceasing attendance before completion of treatment and verification of cure.

It is of interest to note that, in relation to the routine blood examination of pregnant women attending ante-natal clinics, 5,591 women underwent a Wassermann test, and twenty-six of these gave a reaction indicative of syphilis, for which they proceeded to undergo treatment, both for their own cure and to prevent the development of congenital syphilis in the child to be born.

Further particulars of the work done at the Centres in 1938 are as follows :

	<i>Syphilis.</i>	<i>Soft Chancres.</i>	<i>Gonorrhœa.</i>	<i>Other Conditions.</i>
No. of cases under treatment, Jan. 1st, 1938....	1,173	—	611	315
New cases under treatment during year	346	—	955	2,423
Total attendances.....	33,661	—	69,107	28,843
No. discharged after completion of treatment and observation.....	105	—	548	2,283
No. transferred to other centres.....	107	—	155	24
No. who ceased to attend : Before completion of treatment	178	—	152	—
After completion of treatment, but before final tests as to cure..	34	—	120	—

No. of cases of congenital syphilis treated :	
Under 1 year of age	9
Aged 1-5 years.....	2
Aged 5-15 years	15
Aged 15 years and over.....	47
TOTAL	73

Publicity and Educational Work

This is undertaken by the Birmingham Branch of the British Social Hygiene Council on behalf of the Public Health and Maternity and Child Welfare Committee, who made a grant of £620 during the year for that purpose.

The admirable educational work carried out in the city by this body deserves the highest praise. Thereby sound instruction in the ideals and practice of social health and of self-control is conveyed to numerous audiences in factories, in shops, in social and religious organisations, in youth movements, etc. During 1937 an experimental course of lectures led to the inclusion in 1938 of a definite course of lectures in social hygiene in the curriculum of the evening schools throughout the city.

During the year the lecturers of the Social Hygiene Council addressed approximately 24,000 persons in groups, while a large amount of personal advice to individuals was given by its officers. In addition, twenty courses of publicly advertised lectures for men and for women were given by them. A considerable and varied supply of pamphlets appropriate to the needs of audiences and of individuals has been collated and prepared by the Council.

TABLE I—VITAL STATISTICS DURING 1938 AND PREVIOUS YEARS

YEAR	Population Estimated to middle of each year.	Birth-rate.	Death-rate.	Infant Mortality rate per 1,000 Births.	DEATH-RATES PER 1,000 OF POPULATION FROM:										DEATH-RATES PER 1,000 BIRTHS.										
					Enteric Fever.	Small Pox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria.	Influenza.	Tuberculosis.		Cancer.	Diseases of Nervous System.	Diseases of Circulatory System.	Diseases of Respiratory System.	Diseases of Digestive System.	Diseases of Genito- Urinary System.	Suicides.	Other Violence.	Congenital Debility, Premature Birth, Malformations, etc. (under 1).	Diarrhea and Enteritis (under 2).	Puerperal Fever.	Other Accidents of Child Birth.
1901	760,989	31.4	17.5	176	.18	—	.49	.23	.39	.16	.16	1.47	.52	.73	?	?	3.50	?	?	.11	.42	?	?	1.47	2.52
1902	768,757	31.2	16.3	144	.17	.01	.31	.43	.47	.12	.12	1.38	.37	.68	?	?	3.24	?	?	.08	.43	?	?	1.24	2.19
1903	776,604	30.9	15.8	147	.10	.02	.32	.25	.16	.23	.13	1.28	.48	.76	?	?	2.93	?	?	.11	.45	?	?	1.17	1.98
1904	784,532	31.0	17.7	179	.08	—	.31	.11	.75	.21	.13	1.30	.45	.74	?	?	3.36	?	?	.09	.49	?	?	1.40	2.22
1905	792,540	29.0	15.1	141	.06	.00	.38	.08	.26	.14	.14	1.26	.41	.81	?	?	3.19	?	?	.10	.44	?	?	1.31	2.22
1906	800,631	29.4	15.3	157	.07	.01	.36	.22	.41	.17	.13	1.34	.45	.74	?	?	3.19	?	?	.10	.45	?	?	1.32	2.31
1907	808,803	28.8	15.3	133	.09	—	.34	.09	.44	.17	.15	1.14	.37	.83	?	?	2.80	?	?	.10	.44	?	?	1.11	1.98
1908	817,060	29.1	15.3	130	.07	—	.51	.15	.30	.20	.16	1.11	.43	.80	?	?	3.07	?	?	.09	.47	?	?	1.51	1.85
1909	825,400	27.4	15.1	121	.04	—	.08	.15	.49	.20	.31	1.24	.35	.85	?	?	2.82	?	?	.10	.44	?	?	1.02	2.29
1910	833,826	26.8	13.2	115	.04	—	.82	.18	.23	.20	.18	1.22	.30	.82	?	?	2.95	?	?	.10	.41	?	?	1.48	2.11
1911	842,337	26.1	15.0	150	.04	.00	.47	.10	.17	.13	.11	1.08	.32	.89	?	?	2.82	?	?	.11	.45	?	?	1.12	2.16
1912	850,947	26.1	14.1	111	.02	—	.67	.18	.39	.12	.12	1.28	.24	.93	?	?	2.51	?	?	.12	.41	?	?	1.64	2.18
1913	859,644	27.3	14.9	129	.04	—	.46	.20	.19	.19	.13	1.19	.34	1.02	?	?	2.68	?	?	.07	.45	?	?	1.22	2.03
1914	862,534	26.4	14.8	122	.02	—	.35	.17	.35	.16	.16	1.20	.27	.88	?	?	2.69	?	?	.11	.45	?	?	1.85	2.01
1915	891,234	23.8	14.4	118	.01	—	.47	.07	.14	.15	.16	1.28	.27	1.00	?	?	2.82	?	?	.05	.45	?	?	1.65	1.79
1916	895,678	23.1	13.5	104	.03	.00	.48	.14	.25	.18	.13	1.22	.29	.94	?	?	2.64	?	?	.09	.44	?	?	1.56	1.96
1917	900,000	19.7	12.6	101	.01	—	.11	.03	.42	.13	.16	1.24	.24	1.00	?	?	2.10	?	?	.05	.40	?	?	1.50	1.94
1918	870,000	19.4	15.2	99	.01	—	.37	.01	.14	.13	.11	1.30	.26	1.02	?	?	2.10	?	?	.06	.38	?	?	1.47	1.13
1919	910,000	20.9	13.0	84	.01	—	.08	.01	.32	.18	2.50	1.35	.25	1.02	?	?	1.76	?	?	.07	.35	?	?	1.19	1.45
1920	910,000	27.6	12.6	83	.01	—	.16	.12	.20	.22	.46	.93	.17	1.12	?	?	2.46	?	?	.32	.11	?	?	35.2	9.5
1921	919,683	24.1	11.3	83	.01	—	.17	.04	.11	.15	.97	.16	.16	1.18	?	?	2.46	?	?	.34	.40	?	?	35.2	9.5
1922	927,844	21.5	12.1	86	.00	—	.09	.04	.38	.10	.48	.97	.16	1.18	?	?	2.02	?	?	.38	.10	?	?	35.2	9.5
1923	936,079	20.4	11.0	72	.00	—	.20	.04	.05	.15	.28	.92	.16	1.17	?	?	2.38	?	?	.37	.12	?	?	36.6	16.6
1924	944,386	19.2	11.6	83	.01	—	.08	.02	.19	.10	.39	.97	.13	1.30	?	?	1.91	?	?	.39	.14	?	?	31.3	10.9
1925	952,766	18.8	11.7	78	.00	—	.11	.02	.23	.10	.39	.98	.16	1.27	?	?	1.98	?	?	.37	.10	?	?	31.3	10.9
1926	961,222	18.7	11.3	73	.00	—	.08	.01	.13	.12	.27	.94	.15	1.21	?	?	2.10	?	?	.33	.11	?	?	34.0	11.3
1927	969,752	17.8	11.6	75	.00	—	.13	.01	.07	.06	.41	.86	.13	1.26	?	?	1.88	?	?	.32	.12	?	?	35.3	11.5
1928	976,500	17.6	10.9	65	.00	—	.04	.01	.17	.07	.13	.86	.13	1.36	?	?	1.89	?	?	.40	.15	?	?	35.1	11.5
1929	981,000	17.1	13.5	79	.00	—	.20	.01	.13	.09	1.09	.94	.15	1.35	?	?	2.28	?	?	.41	.15	?	?	35.1	11.5
1930	982,000	17.7	10.8	60	.01	—	.06	.02	.11	.09	.13	.90	.13	1.34	?	?	2.76	?	?	.48	.16	?	?	35.4	12.4
1931	1,001,300	16.9	11.7	71	.00	.00	.10	.01	.12	.09	.13	.91	.13	1.43	?	?	2.57	?	?	.44	.15	?	?	35.4	12.4
1932	1,017,500	16.3	11.3	67	.00	—	.08	.01	.09	.06	.27	.92	.14	1.46	?	?	2.90	?	?	.45	.15	?	?	33.0	10.7
1933	1,023,500	14.7	11.0	66	.00	—	.05	.01	.13	.03	.36	.83	.10	1.45	?	?	2.73	?	?	.45	.15	?	?	33.6	10.7
1934	1,028,000	15.3	11.0	68	.00	—	.02	.01	.11	.08	.44	.85	.11	1.43	?	?	2.94	?	?	.45	.17	?	?	33.7	10.7
1935	1,033,000	15.4	10.9	64	.00	—	.05	.01	.06	.08	.18	.71	.08	1.43	?	?	3.04	?	?	.44	.16	?	?	36.3	11.5
1936	1,038,000	15.7	11.2	67	.00	—	.08	.01	.08	.06	.28	.80	.10	1.52	?	?	3.14	?	?	.44	.16	?	?	34.6	11.5
1936	1,038,000	15.8	11.3	62	.00	—	.04	.01	.10	.06	.13	.71	.07	1.57	?	?	3.43	?	?	.45	.16	?	?	32.8	11.2

TABLE II—CAUSES OF DEATH AT DIFFERENT AGE PERIODS IN 1938

No.	CAUSES OF DEATH.	Sex.	AGES AT DEATH.									All Ages.
			0-	1-	2-	5-	15-	25-	45-	65-	75-	
1	Typhoid and Paratyphoid Fever	M.	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—
1a	Small Pox	M.	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—
2	Measles	M.	4	1	—	—	1	—	—	—	—	6
		F.	1	2	—	1	—	—	—	—	—	4
3	Scarlet Fever	M.	—	—	1	1	—	—	—	—	—	2
		F.	—	—	—	2	1	1	1	—	—	5
4	Whooping Cough	M.	28	7	1	—	—	—	—	—	—	36
		F.	24	10	4	1	—	—	—	—	—	39
5	Diphtheria	M.	2	2	9	13	2	1	—	—	—	29
		F.	2	1	6	25	3	1	1	—	1	40
6	Influenza	M.	3	—	1	—	—	12	33	20	14	83
		F.	2	2	—	1	3	5	22	21	23	79
6a	Poliomyelitis	M.	—	—	—	—	—	1	—	—	—	1
		F.	—	—	—	—	—	—	—	—	—	—
6b	Polio-Encephalitis	M.	—	—	—	—	1	1	—	—	—	2
		F.	—	—	—	—	—	—	—	—	—	—
7	Encephalitis Lethargica	M.	—	—	—	—	—	4	4	—	1	9
		F.	—	—	—	—	—	1	5	4	—	10
8	Cerebro-Spinal Fever	M.	3	1	—	—	3	2	2	—	—	11
		F.	5	2	1	—	—	—	1	—	—	9
9	Tuberculosis of Respiratory System	M.	—	1	—	2	61	157	193	32	4	450
		F.	4	2	—	6	79	124	57	9	1	282
10a	Tubercular Meningitis	M.	1	3	2	4	2	2	1	—	—	15
		F.	1	5	4	3	2	2	—	—	—	17
10b	Tuberculosis of the Abdomen	M.	—	—	—	—	1	1	1	—	—	3
		F.	1	—	1	—	2	1	1	—	—	6
10c	Tuberculosis of Spinal Column	M.	—	—	—	—	1	—	1	—	—	2
		F.	—	—	—	—	—	3	—	2	—	5
10d	Tuberculosis of Joints	M.	—	—	—	—	—	1	—	—	—	1
		F.	—	—	—	—	—	—	—	—	—	—
10e	Disseminated Tuberculosis	M.	1	—	1	1	2	3	4	2	—	14
		F.	1	2	1	2	2	—	1	—	—	9
10f	Tuberculosis of Glands and other parts	M.	—	1	—	—	2	—	1	1	—	5
		F.	—	—	—	—	2	1	—	1	—	4
11	Syphilis	M.	3	—	—	—	1	11	29	12	1	57
		F.	—	—	—	—	1	3	4	4	—	12
12	Gen. Paralysis of Insane, Tabes Dorsalis	M.	—	—	—	—	1	4	15	2	1	23
		F.	—	—	—	—	1	2	2	1	1	7
13a	Cancer of Buccal Cavity and Pharynx	M.	—	—	—	—	—	3	26	29	17	75
		F.	—	—	—	—	—	2	6	5	1	14
13b	Digestive Organs, Peritoneum	M.	—	—	—	—	1	26	192	194	77	490
		F.	—	—	—	—	1	20	134	136	99	390
13c	Respiratory Organs	M.	—	—	—	—	—	14	87	32	11	144
		F.	—	—	—	—	1	2	22	14	2	41
13d	Female Organs	M.	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	18	75	36	11	140
13e	Breast	M.	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	1	26	81	40	30	178
13f	Male Genito Urinary Organs	M.	—	—	—	—	1	7	27	38	24	97
		F.	—	—	—	—	—	—	—	3	1	—
13g	Skin	M.	—	—	—	—	—	—	—	3	1	4
		F.	—	—	—	—	—	—	1	2	1	4
13h	Other Organs	M.	—	—	—	1	—	6	15	10	3	35
		F.	—	—	1	2	1	6	22	16	7	55

(Table continued on following page.)

TABLE II—CAUSES OF DEATH AT DIFFERENT AGE PERIODS IN 1938

—continued

No.	CAUSES OF DEATH.	Sex.	AGES AT DEATH.										All Ages
			0-	1-	2-	5-	15-	25-	45-	65-	75-		
14	Diabetes	M.	—	—	—	—	—	2	13	20	10	43	
		F.	—	—	—	—	1	3	39	47	26	116	
14a	Rheumatic Fever	M.	—	—	—	7	7	3	2	—	—	19	
		F.	—	—	—	10	2	2	4	—	1	19	
14b	Chronic Rheumatism, Osteo-Arthritis	M.	—	—	—	—	1	—	6	6	8	21	
		F.	—	—	—	—	2	1	15	19	30	67	
15	Cerebral Hæmorrhage, etc.	M.	—	—	1	—	—	1	45	58	63	168	
		F.	1	—	1	—	—	3	62	76	110	257	
15a	Other Nervous Diseases and Sense Organs ..	M.	20	3	5	13	6	11	26	14	10	108	
		F.	20	4	2	13	5	18	23	17	4	106	
16	Heart Disease	M.	1	1	2	9	16	61	388	444	365	1287	
		F.	—	—	2	13	17	78	288	468	675	1541	
17	Aneurysm	M.	—	—	—	1	3	5	8	4	—	21	
		F.	—	—	—	—	—	4	8	3	—	15	
18	Arterio-Sclerosis and other Circulatory Dis.	M.	—	—	—	—	—	6	105	168	139	418	
		F.	—	—	—	—	1	6	86	101	140	334	
19	Bronchitis	M.	8	2	—	—	2	7	43	55	70	187	
		F.	7	1	1	—	1	7	19	35	69	140	
20	Pneumonia: All Forms	M.	90	20	9	5	15	75	179	71	37	508	
		F.	72	17	8	15	7	35	58	52	40	304	
21	Other Respiratory Dis.	M.	—	1	—	1	1	5	29	11	11	58	
		F.	3	1	—	1	2	3	15	6	11	42	
22	Peptic Ulcer	M.	—	—	—	—	2	10	47	23	6	88	
		F.	1	—	—	—	—	2	14	9	4	30	
23	Diarrhœa and Enteritis	M.	120	4	3	—	1	2	4	4	1	133	
		F.	92	3	—	—	1	3	2	1	2	104	
24	Appendicitis	M.	—	—	1	6	3	7	11	2	1	31	
		F.	—	—	1	1	3	9	11	4	1	30	
25	Cirrhosis of Liver	M.	—	—	—	—	—	3	10	5	1	19	
		F.	—	—	—	—	—	—	5	1	1	7	
26	Other Diseases of Liver etc.	M.	—	1	—	1	—	2	7	3	1	13	
		F.	—	—	—	—	—	1	10	7	7	28	
27	Other Digestive Diseases	M.	4	—	2	4	4	12	22	13	9	70	
		F.	2	2	5	6	—	5	23	11	23	77	
28	Acute and Chronic Nephritis	M.	—	1	1	9	8	22	47	43	31	162	
		F.	—	—	1	1	6	17	47	34	24	130	
28a	Other Genito-Urinary Diseases	M.	3	—	—	—	2	2	25	50	52	133	
		F.	2	—	—	—	1	11	9	2	4	29	
29	Puerperal Sepsis	M.	—	—	—	—	—	—	—	—	—	—	
		F.	—	—	—	—	1	10	—	—	—	1	
30	Other Puerperal Causes	M.	—	—	—	—	—	—	—	—	—	—	
		F.	—	—	—	—	1	36	1	—	—	38	
31	Congenital Debility, Premature Birth, Mal- formations, etc.	M.	295	—	1	2	1	2	—	—	—	30	
		F.	204	5	1	1	—	—	—	—	—	21	
32	Senility	M.	—	—	—	—	—	—	—	7	59	66	
		F.	—	—	—	—	—	—	1	12	129	142	
33	Suicide	M.	—	—	—	1	6	29	57	14	3	110	
		F.	—	—	—	—	2	15	31	2	3	55	
34	Other Violence	M.	8	4	13	25	42	44	49	23	27	233	
		F.	3	2	2	8	8	6	27	20	42	111	
35	Other Causes	M.	13	2	1	7	16	26	53	29	6	155	
		F.	13	—	2	5	8	27	55	29	18	155	
	All Causes	M.	607	55	54	113	216	593	1807	1442	1064	595	
		F.	461	61	44	117	169	520	1289	1247	1541	544	

TABLE III—BIRTHS AND DEATHS REGISTERED IN, OR BELONGING TO, EACH WARD DURING THE YEAR ENDING DECEMBER 31ST, 1938

No.	CAUSES OF DEATH.	Sex.	Acock's Green.	All Saints.	Aston.	Balsall Heath.	Bromford.	Duddeston and Nechells.	Edgbaston.	Erddington.	Gravelly Hill.	Hall Green.	Handsworth.	Harborne.	King's Norton.	Ladywood.	Lozells.	Market Hall.	Moseley and King's Heath.	Northfield.	Perry Barr.	Rotton Park.	St. Bartholomew's.	St. Martin's and Deritend.	St. Mary's.	St. Paul's.	Salley.	Sandwell.	Selly Oak.	Small Heath.	Soho.	Sparkbrook.	Sparkhill.	Stechford.	Washwood Heath.	Vardley.	Not Located.	TOTAL OF CITY.		
	All Causes	M.	166	175	205	210	135	227	135	153	136	178	153	139	150	182	170	115	225	173	228	210	191	240	201	180	153	100	161	149	167	192	201	139	170	136	106	5951		
1	Typhoid and Paratyphoid Fever ..	F.	124	174	174	204	213	162	119	119	149	180	141	174	160	169	114	231	156	161	177	141	204	146	184	129	133	162	165	147	165	194	146	129	62	5449				
1a	Small Pox	F.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
2	Measles	F.	—	—	—	1	—	—	1	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
3	Measles	M.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
4	Measles	M.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
5	Scarlet Fever	F.	1	2	3	3	2	3	1	1	1	1	2	—	1	3	2	—	2	1	2	1	4	1	1	2	1	1	1	—	—	—	—	—	—	—	—	—		
6	Whooping Cough ..	M.	1	1	1	1	1	1	1	1	1	2	2	2	1	3	1	—	2	1	2	1	3	2	1	1	1	1	—	—	—	—	—	—	—	—	—	—		
7	Diphtheria	M.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
8	Influenza	F.	4	1	3	1	5	3	5	1	1	3	5	4	2	2	1	—	3	1	2	1	2	1	1	2	2	4	1	2	7	2	4	1	3	—	—	—		
9	Poliomyelitis	M.	2	2	2	6	—	—	4	1	1	3	7	3	3	1	3	1	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
10a	Polio-encephalitis ..	F.	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
10b	Encephalitis Lethargica	M.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
10c	Cerebro-Spinal Fever ..	F.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
10d	Tuberculosis of Respiratory System ..	F.	15	12	21	12	11	19	4	7	4	18	17	11	5	15	17	12	10	10	30	7	15	21	14	18	2	6	5	4	10	15	11	9	7	11	450			
10e	Tuberculosis of Joints	M.	7	14	10	9	20	3	3	8	3	9	4	4	2	7	6	7	11	8	16	6	11	19	4	5	4	1	3	4	10	8	9	3	10	2	282			
10f	Disseminated Tuberculosis	F.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
11	Tuberculosis of Glands & other parts ..	M.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	Tuberculosis of Glands & other parts ..	F.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	Syphilis	F.	2	3	2	2	1	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

(Table continued on following page.)

TABLE III—BIRTHS AND DEATHS REGISTERED IN, OR BELONGING TO, EACH WARD DURING THE YEAR ENDING DECEMBER 31st, 1938—continued

No.	CAUSES OF DEATH.	Sex.	Alcock's Green.	All Saints'.	Aston.	Balsall Heath.	Bromford.	Duddeston and Nicholls.	Eagbaston.	Erddington.	Gravelly Hill.	Hall Green.	Handsworth.	Harborne.	King's Norton.	Ladywood.	Lozells.	Market Hall.	Mosley and King's Heath.	Northfield.	Perry Barr.	Rotton Park.	St. Bartholomew's.	St. Martin's and Deritend.	S. Mary's.	St. Paul's.	Salley.	Sandwell.	Selly Oak.	Small Heath.	Soho.	Sparkbrook.	Sparkhill.	Stechford.	Washwood Heath.	Vardley.	Not Located.	TOTAL OF CITY.	
12	Gen. Paralysis of In- sane, Tabes Dorsalis	M.	1	1	—	1	1	—	—	—	1	1	1	1	1	1	—	1	1	2	1	4	—	—	1	—	—	—	1	2	2	1	1	—	—	—	—	23	
13a	Cancer of Buccal Cavity & Pharynx	F.	—	3	1	5	1	4	2	4	2	1	2	1	2	2	2	1	3	2	3	6	3	4	3	3	1	1	1	3	1	1	1	2	—	—	7		
13b	Digestive Organs, Peritoneum	M.	12	17	18	19	9	21	14	10	12	15	11	17	17	12	21	7	12	13	11	12	19	15	8	22	13	7	11	14	17	22	17	9	15	14	8	490	
13c	Respiratory Organs	F.	6	15	8	22	7	14	13	9	9	12	11	13	17	5	9	6	16	6	10	16	16	7	8	10	14	12	12	11	5	13	15	10	14	5	390		
13c	Respiratory Organs	M.	3	4	1	1	1	2	2	1	2	—	2	3	2	6	1	1	3	1	1	5	5	3	3	10	5	3	—	—	—	1	1	4	2	1	41		
13d	Female Organs	F.	2	6	5	2	—	8	4	2	3	6	4	5	1	3	6	3	5	5	5	5	3	2	7	3	2	4	1	10	3	2	8	5	3	7	140		
13e	Breast	M.	5	3	4	12	3	6	8	4	6	8	4	2	3	6	3	4	8	4	1	5	2	5	4	1	6	2	6	8	8	6	4	8	7	2	178		
13f	Male Genito Urinary Organs	M.	1	1	4	1	3	6	2	3	5	4	2	2	2	1	1	4	4	2	1	4	5	1	1	5	3	1	3	1	4	7	3	2	7	97			
13g	Skin	F.	—	—	—	—	—	—	—	—	—	—	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4		
13h	Other Organs	M.	—	—	—	—	—	1	—	3	1	2	—	2	—	—	—	1	3	1	1	1	1	1	1	1	—	—	—	—	—	—	—	—	—	—	4		
14	Diabetes	F.	1	3	1	2	1	1	1	2	1	3	3	2	3	—	2	2	3	2	1	2	5	2	7	4	2	1	1	1	1	2	2	1	1	1	35		
14	Diabetes	M.	2	5	2	4	7	2	3	1	4	3	5	2	3	3	1	2	6	6	2	5	4	4	7	4	1	4	1	1	2	5	2	3	1	45			
14a	Rheumatic Fever	F.	—	—	2	1	—	—	—	—	—	2	1	—	1	1	—	1	—	—	—	—	2	2	1	—	—	—	—	—	—	—	—	—	—	—	19		
14b	Chronic Rheumatism	M.	1	2	2	2	—	—	3	3	—	2	1	1	2	2	2	—	1	2	1	1	1	1	2	1	1	1	—	—	—	—	—	—	—	—	21		
15	Osteo-Arthritis	F.	2	2	2	2	2	3	5	3	—	2	1	1	2	3	2	—	6	1	1	3	1	1	2	1	2	—	—	—	—	—	—	—	—	67			
15	Cerebral Hemor- rhage, etc.	M.	4	5	4	9	5	6	7	5	3	4	4	10	11	7	8	13	8	3	3	14	10	7	9	10	6	6	8	8	6	6	8	6	8	10	168		
15a	Other Nervous Dis. and Sense Organs	F.	2	5	4	3	1	2	3	4	3	5	1	3	2	2	3	4	4	5	4	3	2	9	6	4	5	3	3	5	1	2	3	3	1	1	108		
15a	Other Nervous Dis. and Sense Organs	M.	5	2	5	4	3	2	2	1	1	4	1	3	3	2	2	4	5	6	4	8	4	7	6	5	4	5	3	7	4	2	3	3	5	1	106		
16	Heart Disease	F.	42	38	43	53	24	50	35	31	41	27	41	27	30	39	32	21	50	39	26	53	41	46	36	30	31	31	42	51	44	30	48	21	44	30	25	1287	
16	Heart Disease	M.	36	53	53	46	29	58	53	40	27	28	58	38	38	48	42	63	31	84	34	36	50	58	45	58	44	42	43	46	45	53	50	23	43	26	1541		
17	Aneurysm	M.	2	1	1	1	1	2	1	1	1	1	1	1	1	—	—	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	15		
18	Arterio-Sclerosis and other Circulatory Dis	F.	5	16	11	20	9	15	10	7	9	13	6	4	14	13	13	14	12	11	8	13	19	23	12	23	13	9	9	10	12	17	10	14	5	12	6	11	384
19	Bronchitis	M.	4	9	11	13	5	11	7	13	11	11	6	3	15	15	15	10	10	9	10	8	8	15	8	14	8	5	10	11	7	8	7	6	5	8	5	334	
19	Bronchitis	F.	6	7	11	9	1	7	4	3	3	3	6	6	3	11	5	5	5	5	3	1	4	8	7	5	4	2	3	4	2	5	4	5	5	8	187		
20	Pneumonia	M.	16	20	17	11	17	10	8	11	17	10	13	19	12	16	12	16	15	22	11	29	12	14	18	23	16	16	9	8	9	15	13	17	11	13	2	501	
20	Pneumonia (all forms)	F.	2	6	12	16	8	6	4	12	6	10	10	10	7	17	17	9	13	8	8	10	10	6	8	11	4	3	8	9	9	8	11	5	9	2	304		

(Table continued on following page.)

TABLE III—BIRTHS AND DEATHS REGISTERED IN, OR BELONGING TO, EACH WARD DURING THE YEAR ENDING DECEMBER 31st, 1938—continued

No.	CAUSES OF DEATH.	Sex.	Acock's Green.	All Saints.	Aston.	Balsall Heath.	Bromford.	Duddeston and Nechells.	Edgbaston.	Erddington.	Gravelly Hill.	Hall Green.	Handsworth.	Harborne.	King's Norton.	Ladywood.	Lozells.	Market Hall.	Moseley and King's Heath.	Northfield.	Perry Barr.	Rotton Park.	St. Bartholomew's.	St. Martin's and Derend.	St. Mary's.	St. Paul's.	Satley.	Sandwell.	Selly Oak.	Small Heath.	Soho.	Sparbrook.	Sparkhill.	Stechford.	Washwood Heath.	Vardley.	Not Located.	TOTAL OF CITY.	
			M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.
21	Other Respiratory Diseases	M.	—	2	4	2	2	3	—	1	1	1	1	1	1	—	—	1	3	2	1	1	2	—	—	1	1	1	1	1	1	5	2	1	4	—	3	2	59
22	Peptic Ulcer	F.	—	2	4	4	2	2	2	1	2	2	3	2	4	3	—	2	4	7	3	2	2	4	4	5	3	1	1	1	1	2	2	1	3	—	2	2	42
23	Diarrhoea and Enteritis	M.	2	1	9	1	3	8	1	3	2	2	5	2	5	8	1	4	5	12	4	4	5	9	10	4	1	1	1	1	—	3	2	6	3	6	30		
24	Appendicitis	F.	3	2	4	7	3	3	1	2	2	2	1	6	1	1	5	1	1	6	5	1	1	1	4	1	2	1	1	1	1	3	2	4	2	1	1	104	
25	Cirrhosis of Liver ..	M.	—	1	—	—	—	4	—	1	1	—	—	—	1	1	2	2	1	6	1	2	1	1	1	1	2	1	1	1	—	—	—	2	1	1	31		
26	Other Diseases of Liver, etc.	M.	—	—	1	—	1	1	2	1	2	—	—	1	3	1	1	—	2	1	—	2	1	1	1	1	2	1	1	1	—	—	1	—	1	1	19		
27	Other Digestive Diseases	M.	3	1	3	1	2	2	—	1	2	1	2	3	3	3	1	—	1	3	1	2	2	5	4	1	1	2	1	1	—	2	1	3	4	1	25		
28	Acute and Chronic Nephritis	F.	6	1	6	8	4	10	7	2	2	2	5	7	2	5	3	2	9	2	3	2	4	1	1	3	3	1	2	2	3	1	2	2	7	2	77		
28a	Other Genito-Urinary Diseases ..	M.	1	7	5	4	4	4	1	4	3	6	4	3	4	1	10	1	4	5	5	4	5	6	2	5	3	3	3	6	3	9	11	6	4	1	130		
29	Puerperal Sepsis ..	F.	1	1	2	6	2	6	9	—	2	1	—	5	1	5	1	1	2	5	2	2	1	—	—	—	—	—	—	—	—	—	1	1	1	6	2	134	
30	Other Puerperal Causes	M.	2	—	—	—	—	1	—	—	—	1	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11		
31	Congenital Debility, Premature Birth, Malformations, etc.	F.	1	7	4	5	9	12	1	8	2	13	9	5	9	2	11	2	7	14	6	15	9	6	8	1	6	6	1	8	4	17	7	15	8	7	38		
32	Senility	M.	5	3	5	6	8	9	6	6	6	10	3	1	6	6	6	2	6	9	12	5	3	9	5	7	3	3	4	8	5	2	8	4	11	7	3	211	
33	Suicide	F.	2	2	4	6	2	7	2	1	1	2	4	6	3	5	2	1	2	3	1	18	2	2	2	1	4	1	1	1	1	4	4	3	2	2	66		
34	Other Violence	M.	7	4	3	7	—	4	1	1	1	1	8	2	2	4	3	2	7	5	4	7	5	3	5	5	7	3	7	7	4	4	4	2	2	1	142		
35	Other Causes	F.	2	7	7	3	5	5	5	12	11	9	3	5	3	3	2	4	11	7	9	10	5	7	14	3	6	6	1	5	6	5	9	3	6	9	8	235	
		M.	2	4	3	7	5	4	5	8	5	6	4	4	1	6	4	2	2	2	4	7	2	5	5	5	5	5	5	4	8	6	4	8	1	118			
		F.	8	7	6	1	5	1	1	4	6	11	9	4	3	4	3	3	8	4	3	7	4	2	3	6	1	3	3	10	5	6	4	6	9	6	153		
		M.	5	3	6	5	5	5	4	5	1	5	6	4	6	5	6	1	7	4	6	2	4	3	5	8	8	4	8	8	7	3	7	4	4	2	157		
	Deaths under 1 year ..		25	22	34	30	53	9	15	37	19	16	25	45	34	19	28	46	87	37	31	62	36	42	14	14	32	21	11	38	26	50	23	22	11	1068			
	Births		498	370	528	514	660	235	388	411	657	384	409	504	529	461	310	521	785	1517	449	488	584	470	526	373	274	492	411	301	496	437	875	416	475	212	17425		

TABLE IV—DEATH-RATES FROM ALL CAUSES IN WARDS

OLD WARDS.	St. Paul's.	St. Mary's.	Duddeston and Nechells.	St. Bartholomew's.	St. Martin's.	Market Hall.	Ladywood.	Central Wards.	Lozells.	Aston.	Washwood Heath.	Salley.	Small Heath.	Sparkbrook.	Balsall Heath.	Edgbaston.	Rotton Park.	All Saints'.	Soho.	Sandwell.	Handsworth.	Perry Barr.	Erdington North.	Erdington South.	Varley.	Acock's Green.	Sparkhill.	Moseley and King's Heath.	Sally Oak.	King's Norton.	Northfield.	Harborne.	Outer Ring.		
1916	18.7	22.4	19.7	17.0	21.2	16.5	14.9	18.6	12.4	13.7	11.8	12.2	11.5	12.4	12.5	12.1	13.7	13.3	12.6	12.2	9.9	9.8	?	12.7	7.9	10.8	11.0	9.7	9.8	10.5	9.1	10.6	9.9	10.3	
1917	18.2	19.7	17.2	16.8	17.2	15.0	14.4	16.9	12.9	12.6	10.2	11.0	11.3	11.8	12.2	11.5	12.7	12.7	11.9	10.6	9.5	10.3	?	9.1	8.8	9.3	10.9	9.1	10.6	8.6	8.0	7.5	10.1	9.4	
1918	20.0	22.7	19.7	20.8	20.3	20.9	19.4	20.5	15.5	16.3	12.0	13.4	14.8	14.5	15.6	13.7	15.8	15.7	14.7	13.3	11.1	11.7	?	9.8	11.7	10.8	12.3	11.9	11.2	11.8	9.3	11.5	12.5	11.5	
1919	16.8	17.9	15.8	16.5	18.6	14.0	16.1	16.5	13.1	13.4	11.8	10.7	11.1	13.1	13.3	12.8	13.2	12.5	12.5	11.1	10.6	11.4	?	11.1	10.7	10.3	9.5	10.0	11.6	11.1	9.3	8.0	11.3	10.5	
1920	16.9	20.4	16.3	16.6	17.6	12.8	17.5	16.9	11.8	11.9	11.4	11.1	11.0	12.0	12.8	11.1	13.7	12.7	12.0	11.6	9.4	9.5	?	9.5	9.3	10.4	10.4	10.0	10.0	10.0	9.0	8.2	10.2	9.8	
Average	18.1	20.6	17.7	17.5	19.0	15.8	16.5	17.9	13.1	13.6	11.4	11.7	11.9	12.8	13.3	12.2	13.8	13.4	12.7	11.8	10.1	10.5	?	10.4	9.7	10.3	10.8	10.1	10.6	10.4	8.9	9.2	10.8	10.3	
1921	14.7	17.4	13.7	14.2	13.6	14.6	12.6	14.4	11.7	12.1	10.9	9.2	10.5	10.2	11.4	10.7	11.2	11.3	10.9	10.1	11.3	10.1	?	9.3	10.2	8.0	8.3	9.1	10.5	7.6	7.8	8.7	8.2	9.2	
1922	15.1	15.5	13.2	15.9	16.7	15.1	14.8	15.2	12.3	12.6	10.4	10.1	10.9	12.2	12.8	11.8	11.8	11.7	12.2	9.1	9.6	?	10.7	10.1	9.2	9.6	10.6	12.3	10.4	7.8	9.5	10.1	10.1		
1923	13.7	17.1	13.7	13.5	14.0	12.1	12.5	13.8	11.8	11.6	10.1	8.4	9.7	10.4	10.9	10.6	10.7	11.4	10.6	10.3	8.9	9.8	?	8.9	8.1	8.3	8.7	9.4	11.0	8.8	8.1	7.9	9.8	9.1	
1924	14.1	15.5	13.4	14.9	15.4	14.9	13.1	14.5	12.3	12.2	8.9	10.1	10.8	10.8	13.0	10.8	11.4	11.8	11.2	11.8	8.9	9.8	?	10.6	8.9	9.5	10.0	10.0	10.1	9.0	10.0	8.9	10.4	9.8	
1925	14.9	17.7	13.2	14.5	15.4	13.4	12.6	14.5	12.8	14.1	9.7	9.2	9.7	11.8	11.9	11.3	12.5	12.8	11.6	12.0	8.1	9.3	?	9.3	8.1	9.6	8.8	9.8	10.4	8.6	8.3	9.3	9.5	9.3	
Average	14.5	16.6	13.4	14.6	15.0	14.0	13.1	14.5	12.2	12.5	10.0	9.4	10.3	11.1	12.0	11.0	11.5	11.8	11.2	11.3	9.3	9.7	?	9.8	9.1	8.9	9.1	9.8	10.9	8.9	8.4	8.9	9.6	9.5	
1926	14.6	16.9	12.8	14.0	14.6	13.2	12.3	14.1	12.7	12.3	9.3	7.3	9.0	10.9	12.0	11.9	11.3	12.1	10.9	10.9	9.8	9.6	?	8.1	9.3	7.3	8.6	9.2	8.8	8.2	8.6	10.0	10.3	9.2	
1927	16.2	16.6	13.1	13.4	14.8	12.5	13.2	14.3	11.5	12.1	9.7	8.8	8.6	11.2	13.2	11.2	12.4	12.5	11.1	11.7	9.7	10.6	?	9.4	7.9	8.8	8.8	10.0	10.6	9.7	8.9	9.2	10.7	9.7	
1928	14.7	17.5	12.3	12.9	14.1	13.3	12.9	14.0	12.5	11.6	9.7	9.3	9.9	11.7	12.2	9.7	10.7	10.5	10.8	10.7	9.3	9.8	?	8.2	8.2	9.2	7.8	8.3	7.9	9.5	9.1	9.7	10.2	8.7	8.7
1929	17.3	18.1	16.8	16.0	18.7	16.7	15.3	17.0	15.7	15.4	12.1	10.3	10.5	14.0	15.1	13.9	15.1	14.4	13.6	14.8	11.8	13.0	6.8	10.0	10.2	9.7	9.5	10.6	11.8	10.8	9.8	10.3	11.8	10.8	8.9
1930	12.9	14.9	12.2	12.5	14.4	14.0	12.5	13.3	11.8	12.2	9.0	7.8	9.0	11.3	12.6	12.7	11.1	10.9	10.8	11.2	10.9	10.4	5.0	7.6	9.1	8.8	8.0	8.9	10.6	8.3	8.2	7.8	10.2	8.9	
Average	15.1	16.8	13.4	13.8	15.3	13.9	13.2	14.5	12.8	12.7	10.0	8.7	9.4	11.8	13.0	11.1	12.1	12.1	11.4	11.9	10.3	10.7	?	8.7	9.1	8.5	8.6	9.3	10.5	9.2	9.0	9.5	10.3	9.5	
1931	14.8	16.2	13.9	13.5	14.9	15.1	13.1	14.5	12.9	13.9	11.5	9.2	11.4	12.9	12.4	12.1	13.9	12.7	12.3	14.0	9.2	11.1	7.2	8.6	9.7	7.9	9.1	9.4	9.2	11.1	10.0	7.2	9.2	9.5	
1932	13.2	15.8	14.2	13.7	13.7	12.6	12.1	13.6	13.1	13.4	10.5	8.7	11.4	12.1	13.2	11.7	11.5	11.4	11.7	13.0	11.1	11.1	6.7	8.7	9.2	9.0	8.5	10.1	10.7	10.8	10.1	7.2	10.4	9.8	
1933	12.7	13.7	12.7	12.6	14.2	14.0	13.1	13.3	13.2	12.3	9.6	9.1	12.0	12.8	11.7	11.0	10.0	12.1	11.4	13.0	10.8	12.9	5.9	8.4	12.1	9.3	8.8	9.1	10.3	9.2	10.0	8.3	8.4	9.7	
1934	12.1	14.0	12.5	12.2	14.2	13.1	12.0	12.9	13.4	12.3	9.5	8.9	10.8	13.9	14.2	11.6	12.7	12.5	12.0	11.5	11.6	12.4	5.9	8.4	8.0	8.5	8.7	9.4	10.3	10.7	10.8	8.4	9.7	9.6	
Average	13.2	14.9	13.3	13.0	14.2	13.7	12.6	13.6	13.1	13.0	10.3	9.0	11.4	12.9	12.9	11.6	12.0	12.2	11.8	12.9	10.7	11.9	6.4	8.5	9.7	8.7	8.8	9.5	10.1	10.4	10.2	7.8	9.4	9.6	
1935	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11.6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	9.5
1936	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	12.2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	9.8
1937	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	13.0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	9.8
1938	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11.8	..	..	..	..	..	..	..	..	..	..	..	..	..	..	9.3

NOTE.—Figures for individual Wards for 1935, 1936, 1937 and 1938 cannot be compared with those for preceding years owing to many alterations in the boundaries of the Wards in November, 1934. The averages for the Groups of Wards (Central, Middle Ring, Outer Ring) may, however, be considered as roughly comparable.

TABLE V.—DEATHS UNDER 1 PER 1,000 BIRTHS IN WARDS

OLD WARDS.	St. Paul's.	St. Mary's.	St. Luke's and Nechells.	St. Martin's.	Market Hall.	Ladywood.	Central Wards.	Lozells.	Aston.	Washwood Heath.	Salley.	Small Heath.	Sparbrook.	Balsall Heath.	Edgbaston.	Rotton Park.	All Saints'.	Middle Ring.	Soho.	Sandwell.	Handsworth.	Perry Barr.	Edingdon North.	Edingdon South.	Yardley.	Acock's Green.	Sparhill.	Moseley and King's Heath.	Selly Oak.	King's Norton.	Northfield.	Harborne.	Outer Ring.
1916	160	159	164	139	150	139	121	147	114	93	79	69	70	62	98	96	96	86	94	68	91	?	80	39	83	76	55	76	83	61	59	69	72
1917	115	168	136	132	112	89	112	123	105	96	97	94	110	83	73	93	122	97	74	37	71	?	74	57	95	75	90	41	66	77	50	64	67
1918	156	148	104	137	120	152	104	132	111	113	100	69	99	86	80	101	88	92	83	64	72	?	57	80	87	62	66	66	68	70	69	89	69
1919	109	103	105	102	95	120	100	105	93	90	64	67	60	64	61	97	88	76	97	71	63	?	39	79	83	47	36	44	76	69	43	79	64
1920	112	121	93	111	102	85	105	104	80	78	83	72	80	98	64	78	79	55	55	75	51	?	61	47	54	64	73	53	64	28	50	55	55
Average	130	140	120	124	116	117	108	122	89	101	86	76	84	79	75	93	94	86	81	63	70	?	62	60	76	69	64	56	69	62	50	66	65
1921	106	116	104	113	85	117	96	105	87	91	75	57	60	62	75	78	104	77	57	72	69	?	44	68	63	62	67	69	47	60	97	62	61
1922	105	117	102	115	107	113	102	109	84	69	82	68	92	81	75	101	90	80	66	68	51	?	54	69	55	79	56	81	69	41	58	58	62
1923	104	103	99	81	93	80	79	91	60	85	68	59	62	59	54	67	79	64	54	57	45	?	48	58	73	49	34	49	53	76	21	46	51
1924	87	123	103	119	110	81	86	101	68	87	62	95	85	64	83	85	80	77	63	67	49	?	70	52	62	50	58	69	74	59	54	57	60
1925	120	100	101	106	107	119	73	104	87	104	69	58	77	64	70	53	92	74	66	39	64	?	54	32	45	53	55	39	51	66	39	42	50
Average	104	112	102	107	100	102	87	102	88	72	75	66	70	69	68	77	89	61	61	56	?	54	56	56	59	54	61	59	60	54	49	57	57
1926	106	122	79	98	86	106	81	97	52	77	66	43	48	70	52	59	65	59	76	98	53	?	56	52	56	48	70	54	69	65	89	65	65
1927	115	115	104	81	89	85	78	95	78	80	73	34	73	87	66	89	82	73	81	44	47	?	59	49	66	36	71	42	61	44	45	78	56
1928	71	101	73	89	84	100	69	84	63	57	62	71	59	56	46	75	46	60	74	68	34	0	62	40	43	49	47	41	82	54	46	65	50
1929	120	111	125	98	108	73	108	106	80	86	92	50	45	51	84	82	72	71	92	46	43	?	56	49	65	68	74	38	76	54	60	58	56
1930	89	74	67	74	91	88	74	80	53	61	37	54	42	55	69	77	63	58	65	38	47	63	54	51	55	41	51	49	49	36	38	53	49
Average	100	105	90	88	92	90	82	92	65	72	66	60	60	64	66	74	66	64	78	59	45	?	55	48	57	48	63	45	67	51	51	69	55
1931	85	107	87	86	99	103	105	96	86	87	76	59	61	70	83	100	80	75	83	33	60	57	55	59	55	63	45	49	66	60	44	37	55
1932	92	105	98	77	87	76	69	86	52	97	48	61	73	87	63	62	74	66	95	37	63	72	56	56	58	59	53	45	47	76	43	57	53
1933	82	73	72	100	85	79	75	81	56	59	70	54	99	65	44	72	69	66	60	75	49	67	58	45	66	64	60	65	37	38	76	68	59
1934	66	85	87	101	81	106	84	87	77	70	56	42	112	68	72	60	83	69	68	55	63	48	87	52	34	62	64	66	44	49	67	50	58
Average	81	92	86	91	88	91	83	87	78	62	54	67	81	57	72	73	78	76	59	50	59	61	64	53	53	62	55	56	48	56	57	49	57
1935	..	..	..	..	..	..	..	85	..	..	..	..	..	..	..	..	..	59	..	..	..	..	..	..	..	..	..	..	..	..	..	..	58
1936	..	..	..	..	..	..	..	87	..	..	..	..	..	..	..	..	..	62	..	..	..	..	..	..	..	..	..	..	..	..	..	..	52
1937	..	..	..	..	..	..	..	73	..	..	..	..	..	..	..	..	..	66	..	..	..	..	..	..	..	..	..	..	..	..	..	..	53
1938	..	..	..	..	..	..	..	81	..	..	..	..	..	..	..	..	..	62	..	..	..	..	..	..	..	..	..	..	..	..	..	..	54

NOTE.—Figures for individual Wards for 1935, 1936, 1937 and 1938 cannot be compared with those for preceding years owing to many alterations in the boundaries of the Wards in November, 1934. The averages for the Groups of Wards (Central, Middle Ring, Outer Ring) may, however, be considered as roughly comparable.

TABLE VI.—BIRTH-RATES IN WARDS

OLD WARDS.	St. Paul's.	St. Mary's.	Duddeston and Nechells.	St. Bartholomew's.	St. Martin's.	Market Hall.	Ladywood.	Central Wards.	Lozells.	Aston.	Washwood Heath.	Salley.	Small Heath.	Sparkbrook.	Balsall Heath.	Edgbaston.	Rotton Park.	All Saints.	Middle Ring.	Soho.	Sandwell.	Handsworth.	Perry Barr.	Edingdon North.	Edingdon South.	Yardley.	Acock's Green.	Sparkhill.	Moseley and King's Heath.	Selly Oak.	King's Norton.	Northfield.	Harborne.	Outer Ring.
1916	28.9	29.3	30.9	28.8	28.0	28.8	23.8	26.0	21.8	23.0	19.5	15.3	23.8	26.6	22.9	19.3	19.3	18.0	?	19.4	19.8	19.4	22.7	17.6	15.7	24.0	21.3	19.1	19.0	19.6				
1917	26.7	23.3	27.5	28.5	24.5	18.8	23.2	24.6	19.4	23.1	20.4	20.2	19.9	19.2	18.1	13.4	20.7	22.1	19.7	13.2	16.5	15.0	?	14.9	17.4	19.9	19.7	12.8	13.4	19.2	14.5	16.2	16.4	16.1
1918	24.7	24.1	29.2	27.3	24.3	21.6	23.9	25.0	20.1	21.3	20.0	20.1	18.6	18.0	18.2	13.8	21.0	22.4	19.3	14.7	12.5	14.4	?	16.2	15.9	18.8	18.7	13.0	13.5	18.1	16.3	20.9	14.0	15.9
1919	29.1	28.6	29.5	29.0	29.1	21.5	26.6	27.6	18.9	22.4	21.2	19.3	17.7	19.8	18.5	15.0	22.0	23.3	20.0	17.3	14.7	16.0	?	17.2	19.2	18.1	18.2	14.5	14.8	21.1	15.0	17.2	15.3	16.8
1920	37.6	37.2	39.6	35.9	34.9	30.2	33.5	35.6	25.2	32.0	27.9	28.6	23.4	25.9	25.1	18.8	30.2	31.3	26.8	23.8	21.7	21.4	?	24.7	22.8	26.4	24.4	19.3	19.9	26.7	21.3	22.9	19.6	22.7
Average	29.4	28.5	31.3	29.9	28.2	22.4	26.6	28.0	20.6	25.9	22.7	22.8	20.3	21.9	19.3	23.5	25.1	21.7	17.7	16.9	17.0	?	18.5	19.0	20.5	20.7	15.4	15.5	21.8	17.7	19.3	16.9	18.2	
1921	31.8	35.7	32.9	32.3	30.8	28.0	30.8	31.8	21.8	28.7	23.8	23.9	20.5	23.8	22.5	15.2	24.8	25.0	23.0	20.1	16.4	17.7	?	21.1	20.0	20.5	21.0	19.3	14.8	20.8	18.0	19.6	20.2	19.2
1922	29.7	30.8	27.5	28.5	28.6	20.8	25.4	27.3	18.3	25.4	21.9	20.6	18.3	20.2	21.5	14.1	22.6	23.6	20.7	18.7	15.0	15.4	?	20.7	15.7	18.9	18.0	17.4	14.3	17.6	17.6	17.5	15.5	17.1
1923	28.2	30.3	27.5	29.0	27.0	20.7	25.8	26.9	18.4	23.1	22.1	21.6	15.5	18.5	18.6	13.5	21.7	21.9	19.5	16.0	14.1	14.2	?	18.1	16.8	17.4	17.0	17.1	13.2	17.7	17.1	20.8	13.0	16.3
1924	28.0	28.1	27.0	26.8	24.1	20.7	21.9	25.2	17.4	23.1	20.6	18.4	14.1	16.9	18.4	13.3	19.3	20.6	18.2	15.1	12.7	12.8	?	17.1	17.7	15.0	16.7	16.2	12.8	15.7	14.5	19.8	14.5	15.4
1925	23.5	28.3	25.3	25.1	24.6	19.5	22.2	24.1	16.7	22.5	19.7	19.7	14.6	16.4	17.0	12.0	19.9	20.1	17.9	16.3	12.4	12.6	?	20.3	14.9	16.3	16.7	17.1	11.5	16.0	14.2	17.7	11.0	15.2
Average	28.2	30.6	28.0	28.3	27.0	21.9	25.2	27.1	18.5	24.6	21.6	20.8	16.6	19.2	19.6	13.6	21.7	22.2	19.9	17.2	14.1	14.5	?	19.5	17.0	17.6	17.9	17.4	13.3	17.6	16.3	19.1	14.8	16.6
1926	25.4	27.8	24.8	24.8	23.8	18.9	22.9	24.1	17.6	20.4	18.8	19.8	15.3	15.4	17.0	12.1	18.0	19.4	17.4	14.2	12.6	11.0	?	20.8	14.8	16.5	14.3	17.1	12.5	14.1	14.1	16.5	11.5	14.6
1927	25.4	25.8	23.1	23.3	22.0	19.2	20.4	22.7	16.4	19.9	17.7	17.7	15.2	15.3	16.0	11.6	16.5	17.6	16.4	14.1	12.2	11.7	?	20.3	14.8	18.9	14.3	16.2	15.4	13.6	13.6	18.3	11.2	15.0
1928	24.0	27.3	22.4	21.5	22.2	18.4	18.9	22.1	16.1	19.8	17.5	17.7	15.2	15.3	16.5	11.4	17.1	18.2	16.5	13.1	11.5	10.2	8.4	18.5	15.2	19.9	18.8	17.7	12.6	13.2	15.3	15.3	12.5	14.3
1929	23.8	25.6	20.4	21.5	22.3	19.1	19.8	21.8	15.3	17.8	16.4	17.4	14.9	14.4	14.2	11.0	15.8	17.0	15.4	11.5	10.9	12.0	16.8	18.6	16.8	18.1	20.0	16.0	12.8	13.0	13.4	16.0	12.6	14.9
1930	22.5	25.3	21.6	20.9	21.8	17.6	19.5	21.3	16.4	18.8	15.6	14.4	15.6	15.4	15.2	12.3	18.4	18.4	16.0	11.8	10.5	11.1	27.7	18.9	18.1	17.5	21.1	16.7	13.1	13.1	12.6	21.3	12.5	16.2
Average	24.2	26.4	22.5	22.4	22.4	18.6	20.3	22.4	16.4	19.3	17.2	17.4	15.2	15.2	15.8	11.3	17.7	17.2	18.1	16.3	12.9	11.5	11.3	?	19.4	15.9	18.2	17.7	16.7	13.3	14.3	17.5	12.1	15.0
1931	21.4	22.2	20.5	21.2	19.9	17.6	17.7	20.1	15.7	19.4	15.9	14.3	14.7	15.2	14.4	9.7	14.3	16.4	15.0	10.7	10.1	12.6	34.8	17.4	15.9	15.2	18.7	15.7	13.4	13.6	12.2	22.9	12.4	16.1
1932	21.5	20.6	21.5	20.2	18.6	15.5	19.4	19.6	16.3	17.8	14.6	14.5	13.7	14.7	13.3	10.7	16.0	16.6	14.8	10.7	11.7	10.4	27.5	13.6	13.6	15.5	17.8	15.3	13.4	13.2	11.9	21.1	12.4	14.9
1933	18.9	19.3	18.1	18.7	18.4	17.7	16.2	18.2	13.1	15.0	13.1	12.7	12.4	14.7	13.4	8.6	13.9	13.8	13.1	10.5	10.2	10.4	22.2	13.8	13.5	14.2	14.9	13.2	10.8	12.8	11.3	20.1	10.4	13.4
1934	18.5	20.2	19.8	17.5	19.2	15.7	16.8	18.2	14.7	16.5	14.1	12.2	12.6	15.2	13.5	9.0	14.2	14.0	13.6	10.1	11.0	11.0	23.8	13.2	15.1	16.0	15.1	13.8	11.8	12.6	11.4	20.9	11.2	14.1
Average	20.1	20.6	20.0	19.4	19.0	16.6	17.5	19.0	14.9	17.2	14.4	13.4	13.3	14.9	13.6	9.5	14.6	15.2	14.1	10.5	10.8	11.1	27.1	14.5	14.5	15.2	16.6	14.5	12.3	13.0	11.7	21.2	11.6	14.6
1935	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	14.3
1936	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	14.8
1937	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	15.8
1938	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	16.4

NOTE.—Figures for individual Wards for 1935, 1936, 1937 and 1938 cannot be compared with those for preceding years owing to many alterations in the boundaries of the Wards in November, 1934. The averages for the Groups of Wards (Central, Middle Ring, Outer Ring) may, however, be considered as roughly comparable.

TABLE VII—CASES OF INFECTIOUS DISEASE NOTIFIED DURING THE YEAR 1938, CLASSIFIED ACCORDING TO SEX AND AGE

	Sex.	AGES.													Totals.
		0-	1-	2-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75 up.	
Enteric Fever	M.	—	—	—	1	2	—	1	3	—	—	—	—	—	7
	F.	—	—	—	1	—	1	—	2	—	—	—	—	—	4
Scarlet Fever	M.	4	40	219	438	142	39	23	34	11	4	—	1	—	955
	F.	9	32	225	470	185	66	34	49	15	6	—	—	—	1091
Diphtheria	M.	8	17	113	185	87	32	12	20	2	—	1	—	—	477
	F.	5	9	99	231	116	45	28	28	12	6	—	—	—	579
Erysipelas.....	M.	3	2	3	7	9	9	7	31	52	60	45	30	2	260
	F.	7	1	5	3	4	24	13	37	55	70	64	26	17	326
Pulmonary Tuberculosis	M.	1	7	8	12	6	60	78	110	117	106	77	29	6	617
	F.	5	6	8	6	12	67	77	99	42	38	25	8	1	394
Tubercular Meningitis	M.	1	2	—	4	—	1	—	—	—	—	1	—	—	9
	F.	3	5	3	3	2	1	1	1	—	—	—	—	—	19
Tuberculosis of Peritoneum and Intes-	M.	—	—	1	1	—	2	2	—	1	1	—	—	—	9
tines	F.	—	—	1	1	1	3	2	2	3	—	—	—	—	12
Other Forms of Tuberculosis	M.	3	2	7	9	5	12	10	17	2	3	5	4	—	79
	F.	1	3	13	9	4	6	7	10	7	6	1	3	—	70
Cerebro-Spinal Fever	M.	6	3	3	2	1	3	4	4	1	1	2	—	—	30
	F.	9	6	7	1	—	—	1	—	—	1	—	—	—	25
Anterior Poliomyelitis	M.	1	1	—	—	—	—	1	2	1	—	—	—	—	6
	F.	—	—	—	3	2	—	1	2	—	—	—	—	—	8
Polio Encephalitis	M.	—	—	—	—	—	1	—	—	—	—	—	—	—	2
	F.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Encephalitis Lethargica	M.	—	—	—	—	—	—	—	4	—	1	2	1	1	8
	F.	—	—	—	—	—	—	—	1	—	2	2	—	—	6
Malaria.....	M.	—	—	—	—	—	—	—	2	4	1	—	—	—	7
	F.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dysentery.....	M.	2	3	7	13	6	3	2	2	2	2	1	1	—	44
	F.	—	1	10	14	4	1	10	7	—	4	2	—	—	53
Pneumonia	M.	81	73	135	137	59	74	57	156	196	181	126	72	18	1365
	F.	66	82	114	115	33	44	30	83	79	69	88	50	28	881
Puerperal Pyrexia	M.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	F.	—	—	—	—	—	15	96	232	62	3	—	—	—	408
Ophthalmia Neonatorum	M. } F. }	1105	—	—	—	—	—	—	—	—	—	—	—	—	1105
TOTALS		1320	295	980	1666	680	509	497	939	664	565	442	226	73	8856

TABLE VIII—CASES OF INFECTIOUS DISEASE NOTIFIED DURING THE YEAR 1938. CLASSIFIED ACCORDING TO WARDS.

DISEASE.	Acoc's Green.	All Saints.	Aston.	Balsall Heath.	Bromford.	Duddeston and Nechells.	Edgbaston.	Erdington.	Gravelly Hill.	Hall Green.	Handsworth.	Harborne.	King's Norton.	Ladywood.	Lozells.	Market Hall.	Moseley and King's Heath.	Northfield.	Perry Barr.	Rotton Park.	St. Bartholomew's.	St. Martin's.	St. Mary's.	St. Paul's.	Satley.	Sandwell.	Selly Oak.	Small Heath.	Soho.	Sparbrook.	Sparkhill.	Stechford.	Washwood Heath.	Varley.	Not Located.	CITY.	
Enteric Fever	—	—	—	—	—	—	2	—	—	—	—	1	—	—	—	—	—	1	—	—	3	—	—	—	2	—	—	—	—	—	—	—	—	—	1	11	
Scarlet Fever	93	78	43	49	42	70	30	49	79	94	29	62	40	65	56	43	42	120	163	53	35	58	48	49	42	36	65	36	40	44	48	107	46	75	17	2046	
Diphtheria	20	44	20	33	39	58	23	21	28	40	14	24	16	53	29	15	30	36	72	45	27	39	27	43	20	11	21	27	14	17	15	40	13	56	26	1056	
Erysipelas	16	16	20	23	11	40	8	20	16	22	7	8	16	21	19	26	19	17	20	16	16	19	12	17	14	17	12	21	8	19	13	19	11	20	7	586	
Pulmonary Tuberculosis.	25	37	39	34	30	46	21	19	31	26	32	18	30	32	34	23	21	42	47	21	34	39	40	26	26	10	21	19	25	37	28	35	28	21	14	1011	
Tubercular Meningitis ..	—	1	1	—	1	1	1	1	2	—	1	—	1	—	—	1	1	1	2	—	3	2	—	1	1	—	1	—	2	1	1	1	—	—	—	28	
Tuberculosis of Perit- oneum and Intestines	—	—	—	1	2	—	2	2	2	1	—	1	—	—	—	1	—	1	—	1	1	—	—	—	—	—	—	—	1	—	—	2	—	1	—	21	
Tuberculosis of Spinal Column	3	1	—	2	1	1	—	1	—	1	—	1	—	—	—	—	—	2	2	1	1	—	1	1	—	—	—	1	—	—	1	1	—	—	—	23	
Tuberculosis of Joints.	3	2	2	—	1	—	—	1	—	—	1	—	2	2	—	1	2	—	2	1	—	2	2	—	—	1	—	1	1	1	1	—	4	—	—	32	
Tuberculosis of Other Organs	3	2	1	2	3	4	2	2	4	1	1	1	3	2	2	—	3	4	4	1	4	4	2	6	3	1	3	1	1	1	3	2	3	6	—	—	84
Disseminated Tuber- culosis	—	—	—	—	—	—	1	2	—	—	—	—	—	1	1	—	—	—	1	—	—	2	—	—	—	—	—	—	—	—	—	—	1	—	—	10	
Cerebro-Spinal Fever....	—	1	2	—	3	8	—	1	—	2	—	1	1	3	—	2	—	—	5	4	—	7	4	2	2	—	—	—	1	—	1	2	1	2	—	—	55
Anterior Poliomyelitis ..	—	—	—	—	—	1	1	—	—	—	—	1	1	1	1	—	3	1	1	—	—	—	1	—	—	1	—	—	—	—	—	—	—	1	—	14	
Polio-encephalitis	1	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2		
Encephalitis Lethargica.	—	—	1	—	—	—	—	—	1	1	1	—	1	—	—	—	—	—	—	2	1	—	—	1	—	1	1	—	—	1	1	—	1	—	—	14	
Malaria	—	—	—	—	1	—	—	—	—	—	—	—	1	—	—	—	—	—	2	—	—	1	2	—	—	—	—	—	—	—	—	—	—	—	—	7	
Dysentery	2	2	1	5	—	2	2	6	—	2	2	1	4	—	2	—	1	26	1	2	2	1	12	1	1	1	—	—	—	3	5	2	4	3	—	1	97
Smallpox	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Continued Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Pneumonia	74	72	126	67	103	164	34	60	81	55	46	29	41	78	54	29	48	36	194	83	47	70	107	54	58	25	32	48	28	30	51	98	48	67	9	2246	
Puerperal Pyrexia	17	4	10	9	8	18	4	5	5	14	7	5	9	9	12	2	6	19	20	6	5	18	7	15	5	9	9	5	8	11	13	25	7	23	59	408	
Ophthalmia Neonatorum	18	26	46	30	25	69	14	17	25	34	23	8	11	46	54	24	20	17	80	25	63	51	53	55	35	20	12	40	11	27	15	57	16	24	14	1105	
TOTALS	275	286	312	255	270	482	145	207	274	283	164	161	177	314	285	167	196	323	616	261	239	317	318	271	209	133	177	200	143	197	192	398	182	288	149	8856	

TABLE IX.—PULMONARY TUBERCULOSIS. CASE-RATES IN WARDS.

OLD WARDS.	St. Paul's.	St. Mary's.	Dodd and Nechells.	St. Bartholomew's.	St. Martin's.	Market Hall.	Ladywood.	Central Wards.	Locells.	Aston.	Washwood Heath.	Salley.	Small Heath.	Sparkbrook.	Balsall Heath.	Edgbaston.	Rollon Park.	All Saints.	Middle Ring.	Soho.	Sandwell.	Handsworth.	Perry Barr.	Erdrington North.	Erdrington South.	Yardley.	Acoc's Green.	Sparkhill.	Moseley and King's	Selly Oak.	King's Norton.	Northfield.	Harborne.	Outer Ring.
1916	5.11	6.75	6.64	6.66	5.66	4.33	4.30	5.64	3.87	3.53	3.99	4.19	4.44	3.67	3.15	2.81	4.05	3.94	3.76	2.86	2.35	2.78	?	1.66	2.17	2.50	2.65	2.53	1.64	2.27	2.14	1.87	1.19	2.20
1917	5.26	5.67	4.52	6.32	4.36	6.13	4.12	5.20	3.47	3.03	3.42	2.29	3.34	2.85	3.12	2.16	3.62	3.77	3.11	2.17	2.61	2.59	?	2.25	2.21	2.31	3.58	2.81	1.33	2.79	1.97	1.82	1.85	2.33
1918	5.46	4.42	4.34	5.33	5.32	5.66	6.80	5.33	3.13	3.09	2.72	2.08	3.40	3.56	2.97	2.81	4.04	3.35	3.12	1.38	1.98	3.48	?	2.24	2.46	2.15	2.66	2.49	2.12	2.53	1.35	3.33	1.80	2.31
1919	4.30	4.94	4.13	4.00	4.45	3.99	4.14	4.28	3.30	3.22	2.05	1.99	2.30	2.62	2.79	2.22	4.02	2.89	2.74	2.55	1.35	2.89	?	2.14	2.36	1.90	2.70	2.23	1.22	2.34	1.66	1.90	1.81	2.08
1920	3.63	4.91	4.09	4.23	4.13	3.62	4.12	3.96	2.56	2.95	2.39	2.48	2.11	2.61	2.12	1.50	4.16	3.20	2.67	2.81	1.48	2.84	?	2.41	2.19	2.18	2.13	2.03	1.83	2.43	1.65	2.04	1.78	2.21
Average	4.75	5.34	4.74	5.31	4.78	4.55	4.70	4.88	3.27	3.16	2.91	2.62	3.13	2.63	2.96	2.30	3.63	3.43	3.08	2.35	1.95	2.92	?	2.14	2.28	2.21	2.74	2.42	2.63	2.47	1.75	2.19	1.69	2.21
1921	3.13	3.49	3.41	2.51	3.01	2.80	2.55	2.99	2.20	2.65	2.11	1.76	1.58	2.21	2.00	1.28	2.33	2.26	2.04	1.54	1.08	2.09	?	1.44	1.46	1.81	1.47	2.05	1.62	1.41	0.77	0.83	1.39	1.46
1922	2.23	3.20	2.80	2.47	3.42	2.40	2.21	2.68	1.59	1.74	1.81	1.17	1.44	1.41	1.21	1.21	1.63	1.81	1.60	1.15	0.62	1.17	?	1.71	1.40	1.45	1.20	1.88	0.84	1.74	0.67	1.81	1.44	1.31
1923	2.13	3.14	3.20	2.51	3.88	2.46	1.97	2.76	1.90	1.95	1.79	1.41	1.69	1.88	2.22	1.40	2.28	1.60	1.81	1.40	0.61	1.31	?	1.52	1.39	1.39	1.35	1.57	1.31	1.04	1.09	1.22	1.08	1.25
1924	2.16	3.02	2.69	2.40	4.39	2.11	2.10	2.70	1.65	2.43	1.88	1.62	1.54	1.32	2.09	1.01	2.20	1.62	1.74	1.38	0.76	1.31	?	0.92	1.52	1.27	1.34	1.25	1.11	0.93	1.34	1.28	1.53	1.23
1925	1.54	2.37	2.22	2.44	3.41	1.90	1.85	2.25	1.59	2.05	1.37	1.34	1.44	1.09	1.58	1.09	1.62	1.10	1.43	1.19	0.97	1.47	?	1.49	0.92	0.99	1.06	1.34	0.75	1.14	1.01	1.47	0.81	1.12
Average	2.24	3.04	2.86	2.47	3.62	2.33	2.14	2.68	1.79	2.16	1.79	1.46	1.54	1.58	2.01	1.20	2.01	1.68	1.72	1.33	0.81	1.47	?	1.42	1.34	1.38	1.28	1.62	1.13	1.25	0.98	1.32	1.25	1.27
1926	2.28	2.50	2.21	1.89	2.52	1.46	1.62	2.07	1.62	1.98	1.86	1.30	0.83	1.22	1.85	0.97	1.33	1.13	1.41	0.64	0.96	1.27	?	0.95	1.03	0.78	0.88	1.02	0.67	1.21	0.83	2.06	1.32	1.05
1927	2.01	2.87	2.14	1.97	2.24	1.90	1.90	2.15	1.36	1.69	1.05	1.45	0.95	1.14	1.53	1.02	1.32	1.35	1.30	1.43	0.87	0.61	?	0.63	0.72	0.87	0.53	0.91	0.87	1.33	1.16	1.30	0.70	0.92
1928	1.90	2.52	2.28	1.80	2.52	1.55	1.89	2.07	1.48	1.82	0.66	0.98	1.12	1.29	1.10	0.92	1.34	1.56	1.27	1.23	1.08	1.25	?	0.92	1.17	1.25	0.73	0.93	0.71	1.32	1.00	1.33	0.81	0.98
1929	2.08	1.90	2.45	1.50	1.98	2.07	1.46	1.92	1.27	1.92	0.95	0.97	0.92	1.17	1.27	0.75	1.54	1.55	1.23	1.09	0.90	0.97	2.50	1.09	0.83	1.47	1.00	0.78	0.60	0.70	0.56	1.30	0.96	1.05
1930	2.05	1.66	1.74	1.41	1.76	1.55	2.06	1.75	1.72	1.89	1.16	0.93	1.15	0.87	1.53	0.65	1.30	1.39	1.26	0.92	1.03	1.01	0.49	1.24	1.10	1.19	1.17	0.80	0.58	1.01	0.58	0.91	0.46	0.89
Average	2.06	2.29	2.16	1.71	2.20	1.71	1.79	1.99	1.49	1.86	1.22	1.13	0.99	1.14	1.46	0.86	1.41	1.40	1.29	1.06	0.97	1.02	?	0.97	0.97	1.11	0.86	0.89	0.69	1.11	0.83	1.38	0.85	0.98
1931	1.71	2.49	2.38	1.68	1.94	2.26	1.90	2.05	1.55	1.75	1.18	1.20	1.48	1.35	1.40	0.92	1.38	2.12	1.42	1.19	0.82	0.65	1.70	1.29	1.15	0.78	1.10	0.94	0.74	0.87	0.56	1.20	0.82	0.96
1932	1.69	1.76	2.27	1.74	1.54	1.45	2.21	1.91	1.19	1.59	1.11	1.33	1.03	1.19	1.39	0.79	1.43	1.58	1.28	1.02	0.87	0.77	0.82	0.99	0.80	1.11	0.84	0.45	0.66	1.09	0.73	1.15	0.49	0.84
1933	1.36	1.86	2.21	1.81	1.59	1.54	1.71	1.73	1.56	1.67	1.11	0.98	1.01	1.11	1.03	1.25	1.04	1.31	1.21	1.19	1.05	1.31	1.18	0.99	0.95	1.09	0.93	0.85	0.65	1.13	0.69	1.15	0.62	0.98
1934	1.74	1.79	1.73	1.50	2.19	1.73	1.33	1.71	1.34	0.98	1.18	1.23	1.12	1.03	1.27	0.98	1.37	1.16	1.16	1.57	0.96	1.33	0.79	0.85	0.78	1.01	0.85	0.47	0.63	1.08	0.77	0.90	0.73	0.91
Average	1.62	1.97	2.32	1.68	1.81	1.74	1.79	1.85	1.41	1.50	1.14	1.18	1.16	1.17	1.27	0.98	1.30	1.54	1.27	1.24	0.92	1.01	1.02	1.02	0.92	1.00	0.93	0.63	0.67	1.04	0.69	1.10	0.66	0.92
1935	..	..	..	..	..	..	..	..	1.37	..	..	..	..	..	..	..	..	..	0.99	..	..	..	..	..	..	..	..	..	..	..	..	..	..	0.79
1936	..	..	..	..	..	..	..	1.37	..	..	..	..	..	..	..	..	..	..	0.96	..	..	..	..	..	..	..	..	..	..	..	..	..	..	0.73
1937	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1.03	..	..	..	..	..	..	..	..	..	..	..	..	..	..	0.81
1938	..	..	..	..	..	..	..	1.28	..	..	..	..	..	..	..	..	..	..	1.03	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

NOTE.—Figures for individual Wards for 1935, 1936, 1937 and 1938 cannot be compared with those for preceding years owing to many alterations in the boundaries of the Wards in November, 1934. The averages for the Groups of Wards (Central, Middle Ring, Outer Ring) may, however, be considered as roughly comparable.

TABLE X—METEOROLOGY AND MORTALITY IN EACH WEEK OF THE YEAR 1938

No.	WEEK.		Total Deaths.	Deaths under 1 year.	DEATHS FROM.						TEMPERATURE				Horizontal Move- ment of Air in Miles.	Hours of Sunshine.	Rainfall in Inches.
	Ending, 1938.	Measles.			Whooping Cough.	Diarrhea and Enteritis under 2.	Pulmonary Tuberculosis.	Other Forms of Tuberculosis.	Respiratory Diseases.	of the Air.			of Ground.				
											Highest in Shade.	Lowest in Shade.	Mean of Daily Maxima and Minima.	Highest 4 feet deep.			
1	Jan.	8	254	29	1	1	1	12	3	41	45	35	39.0	45.2	1558	4.0	.475
2	"	15	263	26	1	2	1	19	2	43	52	34	42.4	45.1	2085	5.3	1.105
3	"	22	276	33	—	4	6	14	1	44	52	37	44.0	45.3	2012	10.1	.430
4	"	29	242	28	1	4	1	19	1	33	54	34	43.4	45.7	2559	18.2	.805
5	Feb.	5	251	28	—	2	3	16	—	39	54	35	43.6	45.5	2530	10.5	.290
6	"	12	237	30	—	3	9	17	2	35	50	33	42.0	45.6	2117	14.8	.170
7	"	19	247	35	—	1	8	14	4	26	46	30	36.0	45.4	2782	12.9	.060
8	"	26	263	28	—	1	2	18	1	33	55	30	39.6	44.5	1651	5.5	.630
9	March	5	274	17	1	1	1	15	1	32	60	35	45.9	44.9	2116	32.3	.040
10	"	12	238	21	—	1	3	15	1	34	59	33	48.3	45.6	1075	32.6	.010
11	"	19	252	20	—	2	2	17	1	31	59	36	49.0	46.2	1947	35.7	.000
12	"	26	253	20	—	—	—	12	3	38	62	35	47.6	46.9	1713	27.0	.425
13	April	2	252	19	1	2	3	8	1	31	64	39	52.2	47.2	2021	23.5	.065
14	"	9	236	19	—	5	2	17	3	29	59	35	45.6	47.3	1956	35.7	.000
15	"	16	232	22	—	3	3	14	—	32	61	31	46.6	47.3	980	48.2	.000
16	"	23	266	24	—	4	—	17	2	50	53	29	44.1	47.1	1599	26.9	.040
17	"	30	251	20	—	2	3	11	1	42	56	34	45.9	47.3	1759	22.9	.000
18	May	7	250	22	—	4	4	15	2	43	61	36	48.1	47.4	2354	42.1	.145
19	"	14	261	32	—	6	6	16	1	36	67	35	52.0	48.2	1528	30.7	.140
20	"	21	234	13	—	5	—	16	6	35	62	39	51.2	48.8	1272	27.5	.450
21	"	28	245	22	—	4	5	16	3	29	69	40	53.1	49.1	1444	27.2	.495
22	June	4	212	12	—	1	1	16	—	20	69	42	51.6	49.3	2187	35.0	1.425
23	"	11	202	24	—	2	6	9	4	16	68	45	55.9	50.0	1796	44.2	.230
24	"	18	198	19	—	1	4	19	4	16	77	47	59.0	50.5	1467	45.5	.305
25	"	25	176	21	1	4	2	8	1	6	71	47	61.1	51.8	1724	44.8	.095
26	July	2	189	24	—	—	3	13	3	18	68	45	57.4	52.5	1674	40.9	.640
27	"	9	182	18	—	—	8	11	—	8	67	46	55.6	52.5	1665	23.1	1.320

WEEK.		DEATHS FROM						TEMPERATURE				Rainfall in inches.			
No.	Ending. 1938.	Total Deaths.	Deaths under 1 year.					of the Air.					Horizontal Move- ment of Air in Miles.	Hours of Sunshine.	
			Measles.	Whooping Cough.	Diarrhea and Enteritis under 2.	Pulmonary Tuberculosis.	Other Forms of Tuberculosis.	Respiratory Diseases.	Highest in Shade.	Lowest in Shade.	Mean of Daily Maxima and Minima.				Highest 4 feet deep.
28	July 16	173	—	1	11	15	—	14	69	45	56.8	52.3	1594	15.1	1.215
29	" 23	172	—	1	4	14	2	9	74	52	62.0	52.8	922	32.5	.010
30	" 30	195	—	1	4	15	—	12	72	50	60.6	53.8	1788	31.3	.465
31	Aug. 6	164	—	1	1	12	—	16	77	52	64.5	54.6	1402	28.0	.975
32	" 13	167	—	—	4	11	3	10	74	51	63.1	55.4	777	16.0	1.180
33	" 20	177	—	—	5	9	2	6	71	48	60.2	55.4	1979	52.3	.190
34	" 27	169	1	—	9	13	1	7	70	46	58.1	55.1	1099	26.0	.385
35	Sept. 3	183	—	—	5	15	3	10	62	43	52.8	54.8	1263	37.2	.565
36	" 10	185	1	—	8	12	2	11	65	48	55.6	54.1	1369	16.5	.215
37	" 17	208	—	—	5	16	2	16	74	42	57.7	54.1	1495	28.9	.060
38	" 24	205	—	1	6	8	—	19	69	50	58.3	54.1	1193	7.5	.530
39	Oct. 1	172	—	1	4	10	2	13	68	47	57.1	54.4	886	18.1	1.105
40	" 8	183	—	—	7	15	1	6	56	42	50.3	54.4	2716	27.3	1.585
41	" 15	201	—	1	2	11	1	12	64	44	53.7	53.6	2093	28.0	.255
42	" 22	204	—	1	5	16	3	17	60	40	51.2	52.8	1595	21.2	.150
43	" 29	195	1	—	2	11	1	12	56	44	46.3	52.5	1134	13.6	.440
44	Nov. 5	188	—	—	3	14	3	16	67	41	50.7	51.6	2020	19.4	.220
45	" 12	193	—	—	6	15	—	21	62	45	53.1	51.4	1678	11.3	.420
46	" 19	196	—	—	6	22	—	23	60	40	51.3	51.8	1700	19.0	.735
47	" 26	191	—	1	3	11	—	20	52	34	42.1	51.6	1782	23.5	1.300
48	Dec. 3	198	—	—	7	7	—	22	48	33	41.6	50.0	1926	24.2	1.135
49	" 10	198	—	—	3	15	1	18	50	33	43.4	48.8	1827	7.5	1.000
50	" 17	244	—	—	9	19	1	19	52	35	46.0	48.5	1654	8.4	1.330
51	" 24	280	—	—	5	17	—	22	36	21	28.5	48.2	2502	6.3	.690
52	" 31	266	1	1	4	14	—	30	48	28	37.9	46.5	1665	7.0	1.130

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